

**WINTER 2012**

# SMALL FARM QUARTERLY

Good Living and Good Farming – Connecting People, Land, and Communities



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Cover photo: Welsh harlequin, Indian runner and Khaki cambell ducks roam free at the Whole Systems Research Farm in Moretown, VT. Photo by Ben Falk.

## SMALL FARM QUARTERLY

Good Farming and Good Living —

Connecting People, Land, and Communities

*Small Farm Quarterly* is for farmers and farm families — including spouses and children - who value the quality of life that smaller farms provide.

### OUR GOALS ARE TO:

- Celebrate the Northeast region's smaller farms;
- Inspire and inform farm families and their supporters;
- Help farmers share expertise and opinions with each other;
- Increase awareness of the benefits that small farms contribute to society and the environment.
- Share important research, extension, and other resources.

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# Cornell Small Farms Program Update

## Winter Online Courses for Beginning Farmers Open for Registration

The long dark days of winter are the perfect time to dream and plan for the next growing season, and if you're already farming, to organize your records and look back at how last season went. We offer several online courses to help you with this. To learn more about each course, please visit <http://nebeginningfarmers.org/online-courses>. From this site you can see our full calendar of courses, learn more about our instructors, see answers to Frequently Asked Questions, read details for each course, and even visit a sample online course. Courses often fill very quickly, so don't miss your chance to sign up today!

## Help us Help You! Beginning Farmer Barrier Id Survey - Phase 2

Phase 2 has finally opened! This survey is for both beginning farmers (including youth as young as 10!) AND service providers. The information gathered in this (and Phase 1) of the Beginning Farmer Barrier ID survey will be freely shared with beginning farmer service organizations throughout the nation, and will help inform future programs, grant applications, and events. Please help by taking a few minutes to respond to the survey and and share widely with your fellow growers or educators. Find the survey at: [https://cornell.qualtrics.com/SE/?SID=SV\\_e5s9Jknd8dj43IM](https://cornell.qualtrics.com/SE/?SID=SV_e5s9Jknd8dj43IM) More information about the Northeast Beginning Farmer Project and our work is available at <http://nebeginningfarmers.org/> Thank you so much for your time and help!

## Grazing Dairy Production Recordbook

If you are a grazing dairy, a new resource is available to help you make daily notes about milk production, grazing rotation, grain and forage feeding, weather and herd health through the entire year. The tool is intended to help highlight which management practices work best on your farm. This can only be done with teamwork, so use the recordbook to provide benchmarks of performance during discussions with your nutritionist, vet, other consultants, partners, family or employees. To order a free copy, send an email to [vws7@cornell.edu](mailto:vws7@cornell.edu). The book was developed by the NYS Grazing Lands Conversation Initiative in

## Message from the Managing Editor

This year we are celebrating a decade of bringing you Small Farm Quarterly! We certainly have seen an explosion of growth in homesteads, micro-enterprises, and small farms over the past ten years here in the Northeast. From backyard chickens to farm dinners, the revival in small-scale food production is reconnecting people to the land and contributing toward the growth of healthy, thriving rural economies. One of the biggest trends we've seen over the past decade is a rising interest from the youth farming generation. Thanks to the Beginning Farmer & Rancher Development Program through the US Department of Agriculture, organizations to facilitate the technical training and foster enthusiasm of this generation are sprouting up all across the country. I encourage you to read "Slaughter Daughter" by Lindsay Debach in this issue - a personal reflection of a young woman's full circle appreciation for her father's craft as the owner of a small slaughter facility. I

collaboration with the Cornell Small Dairy Project Team and the South Central NY Dairy and Field Crops Program.

## Sustainable Farm Energy 'Virtual Tours' Posted Online!

Many of you weren't able to attend the series of Sustainable Farm Energy Field Days we hosted last Fall. Over 120 people gathered on four farms around New York that featured small-scale solar electric, solar thermal, wind, grease-power, and many other energy saving/producing technologies. We all took home ideas about how to become more energy self-sufficient and reduce our dependence on fossil fuels. A virtual tour of each farm is now available in the form of a photo essay. Visit [www.smallfarms.cornell.edu](http://www.smallfarms.cornell.edu) to see the tour.

think this story is representative of many in this next generation of farmers. Rural youth often leave their communities only to realize their admiration for the skill and perseverance of the farmers and food entrepreneurs back home. You'll notice a few new features in the magazine this year. A new column titled "Book Nook" will suggest interesting reads on a topic relevant to small farmers. Also new this year is a "Photo Essay" feature bringing you images of the season. How does the expression go? 'Sometimes an image can say one thousand words?' What do you think? As always, we love to hear from you. Drop us a line anytime!

Best wishes, Violet



Violet Stone

## HOME AND FAMILY

# A Memoir: The Milk Must Get Through

By Ron Maclean

One morning when I was about 9 years old, I woke to a snowstorm that crept in during the night. When that happened, in the Central New York winter months, during the late 1940's, the first thing families did was to turn the radio on to hear if school was cancelled. Yes, this day would be a snow day.

The Queensboro Milk Processing Plant in the village of Clinton accommodated the many dairy farmers operating in the surrounding area. The milk from the farms was routinely transported to the plant, processed and then carried by bulk transport - tractor trailers- to bottlers. It was critical to get the milk from the farms in a timely manner to avoid spoilage.

Trucks that normally transported milk from the farms to the milk plant could not do so during the multi-day storm. At the time, milk was stored in metal "milk cans" with snug fitting tops. Instead of trucks, the dairy farmers



During blizzards, dairy farmers hauled milk to village plants on sleds, pulled by tractors or teams of horses. Photo by Library of Congress

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hauled the filled milk cans on sleds, pulled by tractors for those who had one or by teams of horses for those who didn't. Farmers shared equipment to make sure all milk got to the plant.

This storm had an impact on small dairy farmers: interrupting the normal milking process, requiring extra time away from the farm to deliver the milk to the station and the extra effort required to handle large amounts of snow around the farm. Whatever price they were paid for their milk, it probably wasn't enough!

With schools closed, many youngsters spent their free time in the "great outdoors." You could go ice skating at the outdoor rink if you were willing to keep up with snow removal. Or sled-ding if you were willing to pack down the snow.

Some of us came up with a different idea. We could ride farmer sleds used to transport milk to the plant during these weather conditions. In the mornings, after donning warm clothing, two or three of us would muster somewhere near the milk plant to ask drivers hauling milk if we could ride back to the farm with them after emptying their milk cans, providing they were going to make another trip back to the milk

plant that day. If they agreed, we would hop onto the sled for a fun trip out to the country. The trips were long and the snow blew so hard on the open back of sleds that it would cake onto our scarves, hats and coats. These cold conditions did not matter for kids our age; it was something different to do.

At the farm, we would help re-load milk cans and then return sometime in the afternoon by sled on the way to the milk plant in the village. I do remember one time we ended up having to walk back to the village because for some reason the farmer could not make the return trip as planned. That resulted in a very long exhausting trek back to the village through rather deep snow.

This creative way to spend time off from school only lasted until snowplows could clear the snow-drifted country roads. However, for that short time it was an exciting way to be outdoors riding sleds...and not have to pull them back up a hill!

*Ron Mac Lean grew up in a small village surrounded by farms in Central New York. He is now retired and lives in the Finger Lakes Region of the state.*



**Book Nook**

# Winter Reads: Water and Natural Gas

By Jill Swenson

*Winter brings us indoors and the weather provides an overdue excuse to sit down and pick up a book. But which one? This column will offer a review of the newest and best books on a particular topic of general interest to the readers of Small Farm Quarterly.*

Hydrofracking and the risks to our agricultural watershed provide the subject for this inaugural column. "Thousands have lived without love, not one without water," W.H. Auden, *First Things First*.

Water matters to farmers. So do oil and mineral rights on agricultural land. Years past, these leases paid the taxes on the land when crops didn't. The Marcellus Shale deposits of natural gas in the Northeast are now being extracted using the force of water and sand mixed with a secret toxic mix of chemicals to fracture the shale and release the gas. Greed, jealousy, betrayal, anger and fear dominate this emotional landscape.

Seamus McGraw, *End of Country*, offers the first memoir written about hydrofracking in the Marcellus Shale region in the northeastern corner of Pennsylvania. McGraw is from Dimock, Pennsylvania, and it's his mother's farmland where now a methane leak continues to leak and contaminate their well and the groundwater. But don't assume McGraw is an opponent of hydrofracking even though he is a journalist. He advised his mother to sign the lease and leans over backwards to provide a balanced account of how this issue doesn't have a right or wrong side, but is a chronicle of the end of a way of life in the countryside.

One of my favorite non-fiction writers, Alexandra Fuller, portrayed the culture and climate of a community in Wyoming where hydrofracking offered the only jobs in town. In *The Legend of Colton Bryant* she tells the true story of a young man's life cut short in an industrial accident. Capturing the complexities of social and family conflicts around these companies coming into farm country, Fuller adheres to a larger truth. The jobs and economic development promised by the wildcat life are too little and cost too much.

Those who maximize profits in the water and gas industries take advantage of a dwindling non-renewable supply that cannot meet a growing demand. Pitting citizens against each and niggling over the specifics of the techniques and methods is to avoid the larger question of the unsustainable nature of such a model of economic development. Nearly a decade ago, Vandana Shiva brought focus to the global political economy of water as the new oil in her book *Water Wars: Privatization, Pollution and Profit*. Last year Bill McKibben's

*Earth: Making a Life on a Tough New Planet* made global climate change a foregone conclusion with mounting evidence that we are past the tipping point. There are no snowcaps left on the Andes Mountains and the fate of freshwater sources is seriously in peril. McKibben points to our First World wasteful ways with water in the U.S., comparing us to the first class passengers on the Titanic.

Author, biologist and poet, Sandra Steingraber wrote the last chapter in her new book, *Raising Elijah* (2011) about high-volume slick-water hydraulic fracturing moving into upstate New York communities and her struggles to find ways to protect her children - and all children - from the toxic, ecologically unstable world. In her earlier books, *Living Downstream* and *Having Faith*, the environment and its desecration are made personal in her voice resembling a modern day version of Rachel Carson.

*The Ripple Effect: The Fate of Freshwater in the 21st Century* by Alex Prud'homme, *Four Fish: The Future of the Last Wild Food*, by Paul Greenberg, *Elixir: A History of Water and Humankind* by Brian Fagan, and *Water: The Epic Struggle for Wealth, Power and Civilization* by Steven Solomon, are four books published on this matter in the last three months. All these books sound the alarm bells and the writers tell these stories in a compelling manner. All four are fascinating reads for a snowy day.

As we continue in vain to find new sources of fossil fuels to serve an unsustainable economy, we waste water. As agricultural sciences professor David Pimentel of Cornell University reports, it takes seventeen hundred liters of water to produce one liter of ethanol. This includes both the water required to grow the corn and the water required for the industrial, chemical production of ethanol. The water required for hydrofracking natural gas is much greater than that required in biofuel production. Both industrial processes produce toxic wastewater that further destroys freshwater sources.

"Fracking makes water disappear," wrote Steingraber in her way of making the biology clear to those who are not physical scientists. The added chemicals alter water irrevocably into a toxic stew. Steingraber points to the obvious but still inconvenient truth: "Sooner or later, the gas will run out." These things we know for certain. "Sure thing number three: Accidents happen," wrote Steingraber. Those in Bradford County, Pennsylvania, have experienced a tractor trailer carrying an acid used in hydrofracking overturn in their community. And in Dimock, Pennsylvania, the accidental groundwater contamination happened without a crash or a bang.



Natural gas drilling

Photo by Helen Slottje

Cornell University Press just released the most recent book on this topic, *Under the Surface*, written by Tom Wilber. A reporter for the Binghamton *Press & Sun-Bulletin*, Wilber covered business, health, and environmental issues the past 17 years. Wilber interviewed scientists and key stakeholders on all sides of this issue. He offers an intimate view of the controversy between those who see the Marcellus region as a new economic engine to boost the languishing economy and those who foresee environmental disaster, devaluation of land, degradation of water and the ruin of the landscape and rural way of life. His evenhanded treatment gives voice to the varied con-

stituencies, including farmers tempted by the prospects of income but worried about the ecological consequences. *Under the Surface* is the latest, and perhaps best, book to address the issues of hydrofracking and water we now face in our communities.

Next month, the best new memoirs about life on a small farm.

Jill Swenson is the president of Swenson Book Development, LLC, based in Brooktondale, NY. She may be reached at [jill@swenbooks.com](mailto:jill@swenbooks.com) or 607-539-3278.

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DAIRY

# Consider Deep Pack Barns for Cow Comfort and Manure Management

By A. Fay Benson

Small dairy farm operators may soon be confronted by the prohibition of winter spreading of manure. Any farmer looking to update their barns should consider a design that can accommodate a deep bedded pack (DBP) system.

A DBP system incorporates animal feeding and manure storage into one open barn, and can be especially helpful to smaller grazing farms. It generally consists of a foundation of concrete or hard clay. There may be a layer of gravel and then a bedding pack of straw, hay, sawdust or well-chipped wood shavings. Manure and urine mix into the bedding that remains in place for several months and is generally cleaned out once a year. A deep pack system is different than a composting pack that is aerated in the barn daily by tiller or turning. Biologic activity taking place 5-7 inches deep in the pack provides the heat that cows enjoy through the winter months.

### Vermont Pack Barns Show Results

Deep bedded pack barns have been used in Vermont since the state prohibited winter spreading of manure in 1995. During a visit to Jack Lazor's organic Butterworks Farm in Westfield, VT, in January, I observed the pack's effects on cow comfort. The pack at Jack Lazor's registered a cozy 80 degrees F.

The bedding pack rises over time as more and more bedding is added throughout the winter. If watering systems are used on the pack to accommodate multiple groups, they need to accommodate this rise by placing a coil of water line underneath the waterer. As the pack rises, the waterer is lifted up. If there is only one group of animals or if all animals can get to the feed alley, then the waterers should go there.

This past summer I visited Jack's farm again. The 350-acre farm was established in 1979 making door-to-door deliveries of its own yogurt and cottage cheese. Today the farm includes its own granary, yogurt and cheesemaking with product distribution throughout Vermont and New Hampshire.

## Pros of a Deep Bedded Pack System

- \* Comfortable environment reduces lameness and provides for deep and restful sleep that in turn positively impacts milk production.
- \* Manure storage with less capital investment and less labor requirement than liquid storage
- \* Pack manure mixed with extra carbon is a better soil nutrient than raw manure from typical manure storage.
- \* Particularly adapted to grazing dairies since barns are used only 6 months and allow plenty of time to clean
- \* An option for out-dated dairies looking for build a combined housing-feeding barn with manure storage

## Keep in Mind

- \* As with any type of housing structure, adequate bedding and good milking hygiene help manage the pathogens naturally found in a bedded pack system.
- \* Side retaining walls need to be strong enough to contain 4-6 feet of the pack and stand up to cleaning. Cow access, animal grouping, and travel-to-the-feed-alley patterns can be managed by electric fences which reduce manure in bedded areas.
- \* Good ventilation - whether the barn is positioned to take advantage of geography for natural wind ventilation or uses mechanical assistance with fans - helps keep the cows healthy, the pack dry, and odors down.
- \* Opinions differ on just how much room should be allowed per cow, but it is generally advised to allow for 70-85 to 100 sq. ft. per animal which is higher than freestall style housing. Breed, age, and animal condition impact that decision-making when planning a new barn. The general consensus is the more room the better, making a DBP system better suited to smaller herds.

The third-generation farm milks a herd of 85 Jerseys on an 80-percent forage diet. From November to May the cows are housed in a 60-foot-wide, 120-foot-long, hoop-top barn. Straw is added for clean bedding twice a day. Approximately a bale and a half is used per day.

I arrived for my second visit to the farm in August, just as the compost piles were being aerated with a tractor-powered turner. The pack is moved from the barn in June after crop work is completed and the first cutting of hay is harvested. Jack uses a dump truck to move the manure from the barn to long rows in a field for composting.



Ben and Kate Whittemore's organic dairy herd grazes with Dead End Farm's new deep bedded pack barn in the background.

Photo by Kate Whittemore

He does not go through the required process to produce Certified Organic Compost. He is mainly interested that the manure becomes "aged" so that it has stabilized most of the nutrients and is easier to spread in the fall. Jack explained his reasoning for this timing with a question. "When does nature apply its carbon and nutrients to the soil?" Carbon and nutrients (like dead grass, leaves and decaying roots) are applied in the fall and decompose through the winter so they can be used in the spring for new growth.

I asked Jack about the significant expense of the straw for the pack: \$80 every other day plus the labor of composting the pack. Jack said that the return is in the positive effect on the soil and soil nutrients. (Since my visit, Jack has started harvesting his own straw, reducing his expense)

"Raw manure is hard on the soil and the environment. Many of the nutrients are volatile or water soluble. When straw, which has a high ratio of carbon, is added, more of the volatile nutrients are captured and stored", Jack explains. These stored nutrients undergo the biological activity of composting which stabilizes them and minimizes run-off in a heavy rain.

### New York Farm Adds Pack Barn in 2010

In 2010, Ben and Kate Whittemore of Dead End Farm in Candor, NY, built a 70x250-foot bedded pack barn with a 16-foot feed alley and 16-foot scrape alley. The Whittemores operate an 80-cow organic dairy, raise grass-fed beef cattle and pigs, and have a free range flock of laying hens. They sell products from the farm by appointment and at area farmers' markets. They were recognized as Super Milk producers in 2010.

## Resources for more Information

Bedded Pack Management System Case Study by John M. Thurgood, Paula C. Bagley, Challey M. Comer, Daniel J. Flaherty, Jason Karszes, Mariane Kiraly, Cornell University Department of Applied Economics and Life Sciences, September 2009

Conservation and Producer Benefits of a Bedded Pack Management System by John M. Thurgood, Cornell Cooperative Extension, and Brian K. LaTourette, Watershed Agricultural Council, 2007

NRCS Fact Sheet: Compost Bedded Pack Dairy Barns, June 2007

Video: Milking Time at Dead End Farm, Candor, NY, <http://vimeo.com/31955654>



Jack Lazor's deep pack barn cleaned out for summer. The waterers have approximately six inches of line underneath so the waterers rise as the pack rises with more bedding applications.

Photo by A. Fay Benson

"Our cows love the bedded pack barn with its thick cushy bedding and wide open space to kick up their heels," Kate Whittemore writes in her farm blog. "Most of our cows will choose the bedded pack at night over the pasture."

While using chopped hay in the pack was less expensive, it was more labor intensive and not as dry, and "since hay is in short supply this year, we plan to use a layer of bark and kiln-dried sawdust this winter," Kate says.

Kate and Ben built the new barn with cow comfort and health as their primary concerns. They were also interested in the soil health benefit of the aged manure compared to slurry. "We are waiting on results of a comparison of nutrients between the two, but I have to think the additional organic matter in the bedded pack adds value to our fields," she says.



Cows relax as farmers tour a deep bedded pack barn in Vermont.

Photo by A. Fay Benson

### Check on Funding Assistance

Because of the environmental benefits of a bedded pack system, the USDA Natural Resources Conservation Service (NRCS) may offer funding incentives for designs that pass their engineering specifications. Contact your local NRCS office to learn more.

A. Fay Benson, a dairy owner for 20 years, is a Small Dairy Support Specialist with Cornell University's South Central NY Regional Team, Project Manager of the NY Organic Dairy Initiative, and a member of the NY Crop Insurance Education Team. He can be reached at the Cooperative Extension office in Cortland, NY, at 607-753-5213, [afb3@cornell.edu](mailto:afb3@cornell.edu). Freelance agricultural writer and publicist Kara Lynn Dunn assisted with the development of this article.

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**COMMUNITY AND WORLD**

# Slaughter Daughter

By Lindsay Debach

My father is a butcher. He doesn't have a potbelly or drape strings of sausages from his hands. He doesn't have a mustache or wear one of those little straw hats, either. He does boast that he could skin a cow at the age of 10, can strip the meat from a carcass down to the bones and can season ham and bacon to perfection. Like his father before him, who started the Leona Meat Plant in 1963, he's been in the family meat business his whole life. There was no question who would take over the shop once my grandfather retired. My Dad and Uncle became managers of the place in the early 80's.

Since I was old enough to remember, I've known what the inside of a cow looks like, the way a pig twitches as it dies, and that there are exactly 50 cocktail wieners to a pound. Often we'd watch as people came to drop off animals for the slaughter: cows, pigs, sheep, and on rare occasions, even ostriches would stare blankly from behind the white slats of the holding pens. Whenever friends came over, the visit always included a trip down to the shop, where they'd gawk in amazement at the sides of beef hanging in the cooler, the cow heads in the bone barrel out back, and the puddles of blood that got washed off the kill floor. But the fact is, the blood stains on my Dads' white apron and coat never deterred me from giving him a hug. I accepted that fact that my Dad cut carcasses all day, that the dog licked his shoes clean some nights when he came home from work and that the knives in our kitchen were always sharp. Being a vegetarian is something that I'd never be able to do with an honest heart. A summer job, a steak on the table, a topic for my college entrance essays: the meat plant served as a backdrop to my youth.

I don't remember how old I was the first time my Dad asked me to help out in the shop, but I remember it involved measuring bits of cubed beef into one-pound bags. At first, I was pretty impressed with my new post. The oversized butcher coat and apron that I wore swathed me in white and I felt important. But after ten minutes of grabbing the chilled meat chunks and fumbling them into their plastic receptacle, I was -- to put it gently -- over it. My hands felt like they were going to fall off, and the smell of raw beef gave me a taint of nausea.

Working at the meat plant never did regain its novelty. From 5th grade on, my brother, sister, cousins and I spent our last day of school each year in one of the plant's coolers doing what we came to refer to as "clamming." Around the beginning of June the town Vets Club would have their annual clam bake and would order all of their mollusks through the Leona Meat Plant. The gritty clams came to us on a truck in bushel bags of 400 or so, and it was our job to dump them out, wash them, and bag them up by the dozen in little white cheese cloth bags so they could properly bake. While the rest of our class was out enjoying the first hours of summer vacation, the Debach kids were stuck in a meat cooler freezing our fingers trying not to cut ourselves on broken clam shells.

In December, it was ring bologna: we'd have to grab it off the racks where it cooled after coming out of the smoke house, and then cry-o vac every ring. If we needed money, if Dad needed help, if Mom wanted us out of the house, we'd work at the meat plant. There was always something to do, and if you couldn't find anything then, as Dad used to say, "you can always slice bacon!"

During high school, in order to afford a class trip to England, I made the jump from part-time help to full-time employee when I agreed to work for the entire summer in the retail part of the plant. Somewhere between counting out Hormel Cocktail Smokies and slicing the chipped beef I decided that as soon as I could help it, I wouldn't ever have anything to do with this place again. I saw butchering as a dirty, smelly, vomit-inducing occupation. One so unglamorous that I was embarrassed to tell people what my Dad did for a living.

Still I couldn't seem to erase the Leona Meat Plant from my identity. During move-in day at college, my roommate gave a silent stare in the direction of the cardboard container of books I'd just plopped on the floor. They were in a huge box that I had taken from the meat plant and that had probably - in its initial incarnation - housed a rib eye or a top round.

"Is that blood?" my new roommate asked me. I looked up from unpacking and confirmed that yes, it was blood, and that no, it wasn't human. My Dad was a butcher. Move-out day from the



*Lindsay Debach poses in between some pig carcasses in the Leona Meat Plant cooler.*

dorm gave me an even harsher reminder of my past. On the afternoon that my parents were to come get me at school, the family car happened to be having some motor trouble. Even in my relief to be leaving college for the summer, I was mortified when my mother and father arrived outside my dorm in a refrigerated meat truck. The "Leona Meat Plant" insignia and Hereford cow slogan shone boldly against the minivans and SUVs of the other "normal" families.

I transferred to a college out near Chicago; a good 15-hour drive from home and from the family business. I came home less often, talked to Dad less often, and little by little, managed to conceal my charcuterie roots. Throughout college I tried not to think about the butcher shop and how the only time I could spend with my father was to put a white coat on and work beside him. How in high school, my friends got to work at the pool while I swept floors and bagged liver. I let fade from my memory how many times I'd slipped on the bacon-greased floor and the near-fatal incident of getting hit in the head with a swinging meat hook.

The summer after I graduated from college, I moved home. Confused and daunted by the prospect of choosing a career path, I opted to work at the one place where I knew I'd always have a job: Leona Meat Plant. But this time I wasn't bagging chickens or wrapping ground beef. I worked in the office, answering calls, chatting with customers about whether or not they wanted their pork shoulder cut into steaks or left as a roast. But, I started wondering what on earth I was doing with my life. So, I left.

In May 2008, I packed my bags to come to New York City. Initially, I was swallowed by the excitement of living in New York, a new job, a new social circle. But upon each successive visit home, I'd be met with a father and former boss who never



*Brothers Chick and Mike Debach, owners of Leona Meat Plant, with fresh cut beef carcasses in the back ground.*

ceased to remind me of what I had left behind. It wasn't until I'd been in a place where my identity was no longer defined by the butcher shop that I realized there was something more to it I'd been missing.

I was tapped on the shoulder with this realization on a summer visit home. It was about two months after I'd moved to the city. On a hot and muggy July morning I took my Dad's invitation to come down to the pasture to help herd our grazing beefers from one end of the field to the other so they could eat fresh grass. Traipsing behind Dad in over-sized muck boots and dodging the occasional cowpie, I watched as he opened one gate and closed another, talking to the cows in a half-serious voice. He laughed as they literally ran into the pasture with fresh grass. He was so invested in it, these were more than just animals, this was his and my Uncle's pride and joy. And that's when it hit me: maybe this butchering thing wasn't just the bloody mess that I saw on the killfloor. Maybe there was something dignified about it. My Dad knew this trade inside and out; from the cows' favorite type of clover to how to properly tie-up a crown roast. My Uncle too. They've perfected their craft over their entire lives, and the skills that they have are not only rare, but foster a tradition that began before sustainability became a commodity. I came back to the city after that trip with the notion that there was something more to what my Dad did, and that it was honorable.

I took every opportunity when I came home to be around the process; whether it was moving the cows, or looking at the fresh sides of beef hanging in the cooler. On a snowy night just before Thanksgiving, my eagerness to learn more brought me back to that muddy cow pasture. The snow blew across the thin spotlight beam and illuminated the pasture before me. My Uncle and Dad yelled muffled orders to each other as they herded a hearty group of cows through a gate and to the 1200lb. bale of hay that awaited them. The rowdy bunch eagerly stepped up to the mound of food and began grazing, ignoring the blizzard that dusted their thick winter coats. The men looked on like proud parents.

I followed my Dad into the meat plant where he and his brother eagerly inspected the beef killed earlier that day. In a small walk-cooler with sterile white sides and a cement floor, they focused their attention on the 6 sides of fresh beef hanging on the rusty steel rail.

"They're filled out nicely...this one looks really good...nice cover on the shoulder...I bet we could get at least \$1200 for him." It's a language I've heard all of my life, but that I still don't understand. Or rather, one that I never chose to learn - that of killing, meat and making money. I pulled off my glove and reached out to touch one of the chilling carcasses. The waxy, congealed flesh was lukewarm and sticky under my hand. A hard coating began to form in the cooler's chill, almost like an orange that's been peeled and left out. With talent fostered by years of experience, my Dad and Uncle can read these lines of fat and muscle as a map. In humility and earnest, they practice their craft; not to be noticed or capitalize on a growing food trend. But as a living and way of life.

I returned to the city jaded. Not by the meat plant I once resented but to the "scene" around me. In my hip Brooklyn neighborhood, weekly butchering classes were attended by hundreds of eager city dwellers and a white meat apron was the new black. Meat specialty shops sprung up, with a novice meat cutter behind a sturdy butcher block, casually wielding a cleaver and moving slow enough to pose for the photographer in the room. But did these "foodies", these "rock star butchers" heralded by The New York Times and the food blogs know what it was to shoot a cow? Had they ever loaded boxes of beef until their back muscles gave out?

Now I'm coming to terms with the "slaughter daughter" that I am, with the fact that only because of the long days my Dad spent on the kill floor was I afforded the opportunity to go to college, or the connections in New York; the very places I practiced hiding my identity. My father may not be making the front page of any paper, or the buzz of the butchering blogosphere, but he practices his craft because it is what he knows, and knows it well. He's not concerned about anyone watching. And I can now honestly say, neither am I.



**TECHNOLOGY ON THE FARM**

# Winter Homework? Take an Online Class!

By Betsy Lamb

Winter has arrived! What can you do with those long evenings? Learn something new with distance learning!

'Distance learning' is the delivery of instruction through electronic means where the instructor and learner are geographically separate. There are a wide variety of types of distance learning but this article will focus on some of the on-line educational resources available through Cornell University that you can access on your computer. Some are scheduled classes and others are available whenever you have time. Most are available to anyone in the Northeast. Some are even free!

Here's the geek speak up front - what software, hardware and plugins do you need to get started? An email account is usually essential - you probably already have that. Bandwidth - I'm already getting out of my depth - is how fast you can send and receive information - also indicated by connection speed. If you have a

dial up or satellight connection, online instruction isn't impossible to access, but you will need patience and the audio and video may be spotty. DSL and Cable Modems provide solid connections and allow for smooth use of all the aspects of the courses.

You might also need plugins like Adobe Acrobat Reader to be able to read pdf documents in your web browser and Flash Player to be able to watch videos. Don't worry. Most distance learning programs will help you download these programs (for free!) if you don't already have them.

There is a series of Beginning Farmer courses running from October to April each year with topics ranging from Guerilla Marketing or Financial Recordkeeping to the newest information on growing veggies or berries. They run about 6 weeks each, cost \$175 and mix real-time on-line webinar meetings with on-your-own-time readings and activities. The annual calendar of courses is available at <http://nebeginningfarmers.org/online-courses/annual-cal>

endar-of-courses/. Where else can you have direct access to experienced growers and Cornell Cooperative Extension Educators and ask them all the questions you want?

The Cornell Horticulture Department offers on-line courses with a hands-on component. Two that might be of interest, are Organic Gardening and Plant Propagation. Check out <http://hort.cals.cornell.edu/cals/hort/teaching/distance-learning/index.cfm> to see what is offered and when. For each course there are on-line discussions and even virtual field trips!

Now you can even get pesticide credits for on-line courses! The Pesticide Management Education Program (or PMEP) has a series of on-line pest management courses that fulfill the requirements for Department of Environmental Conservation pesticide license recertification credits, both in core credits and in category courses. Topics include Safety Precautions with Pesticides, Personal Protection, Sweet Corn IPM, and Scouting Basics. Each module has a pre-test followed by text, photos, and other educational materials. Once you have studied the information, and spent at least an hour on the materials, you successfully complete a post test and are issued a certificate. Most courses cost \$25. There are already 17 modules with new courses being added. For more information go to: <http://pmepercourses.cce.cornell.edu/>.

Do you have forest lands on your farm? The Department of Natural Resources supports ForestConnect - an internet seminar series with free monthly broadcasts on the web at <http://www2.dnr.cornell.edu/ext/forestconnect/web.htm>. They even, kindly, include a trouble-shooting page on their website to reduce connection frustration. You can learn about maple syrup production or silvopasturing, the practice of mixing cows and trees! There are archived presentations on those and many more topics. And new live webinars (web seminars!) are listed as they are scheduled so you can actively participate in the discussion by emailing questions!



Online classes can be taken right from your living room, or barn!

So how about some leadership information? There are free archived webinars on communication strategies at <http://www.ecornell.com/archived-webinars/> through eCornell. (Warning: When you sign up you might get some eCornell emails.) eCornell also has courses on Human Resources Management, Financial Management and Marketing (<http://www.ecornell.com/individual-course-list>) that lead to certificates in these areas. And if you'd like to earn degree credit but can't get to campus, the School of Continuing Education and Summer Sessions provides a wide range of courses in summer and winter sessions (<http://www.sce.cornell.edu/dl/index.php>). How about Popular Culture in the United States, 1950 to the Present to liven up those winter nights!

For more information, contact Elizabeth Lamb at 607 254-8800 or [eml38@cornell.edu](mailto:eml38@cornell.edu).



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**GRAZING**

# Turning Sand into Soil

By Anne Lincoln

*This article was one of four winning entries in a writing contest sponsored by the New York State Grazing Lands Conservation Initiative (GLCI). GLCI is led by a Steering Committee of farmers and agricultural professionals to promote the wise use of private grazing lands, and is funded by the USDA-Natural Resources Conservation Service.*

It was sand.....sand everywhere. It was like beach sand that filled the house when the windows were open on a windy day. I had to wear "goggles" over my contact lenses to keep the grit out when I walked in the yard. Some neighbors said "you can't grow anything on that sand", but this is what my husband, Dave, wanted to use for pasture for beef cows! The neighbors didn't know, though, that this was like setting down a challenge to Dave.

I saw what Dave was capable of long before he decided to raise beef on our 25 tillable acres in Willsboro, NY. We had moved there in 1998 after learning we did not enjoy the sounds of close neighbors while living in town. We had both been dairy farmers in previous lives before we met in 1992 and we both still loved growing crops and animals in a quiet country setting. My first surprise occurred when Dave had spent the day leveling off a piece of land near the woods. He said he was going to build a shed for his equipment. Well, I kind of humored him, thinking to myself "that's too big a project; he will never finish it". I found I had a lot to learn about Dave. Not only did he build the shed, but over the next two years, built it bigger and bigger, even adding an enclosed workshop with a cement floor.

I was obviously worried when he started talking about building a fence that "you can see through" around the fields, especially the field in front of the house. Well, that came true too! In 2004, when we had decided it was time to start getting some cattle, we looked around for someone to build a fence for us. The contractors seemed to all be too busy or too expensive, so Dave bought a post-pounder, ordered a tractor-trailer load of fence posts and went to work building a six-strand high tensile fence.

OK, well, now we had a shed and a fence. What about grass? Remember, you can't grow anything on that sand! There was some wispy blue grass that was struggling to grow on the nutrient poor soil, so at least we had something to start with. However, the spark to really get things started was our neighbor, Michael Davis, who worked for Cornell. He introduced Dave to some books about grazing, including Quality Pasture by Allan Nation, Management-Intensive Grazing by Jim Gerrish, and Salad Bar Beef by Joel Salatin. Dave ate these books up almost as fast as our steers eat new grass. Dave was now full of ideas on how to grow beef on the sand. Managed grazing would allow us to watch our beef grow on lush green grass instead of what we had growing in the sandy fields.

We started grazing in 2005 with a handful of Herefords, putting them in paddocks separated with temporary fencing, and moving them a few times a day. It was a start, but we had a long way to go to raise good healthy beef on that soil. Dave continued his grass education by attending many pasture walks throughout the Northeast. He went to seminars about grazing and beef cattle presented by the Cornell Cooperative Extension and other organizations. Dave was especially impressed with Darrell Emmick's presentation at "Hoof to Rail" about what was termed the "Law of Least Effort Grazing". Darrell said that it was important to relate the animal behavior to how they graze and react to each other and their surroundings. There seemed to be an emphasis in many presentations and books on observing the pastures and the animals and this has become a key in our cattle grazing philosophy.

One book also mentioned it would take five years to really see an improvement in the pastures and suggested that many people got discouraged and gave up before they got to this five year mark. Well, it did take five years of grazing with about 30 Hereford and Angus cattle, moving them 2-5 times a day through small paddocks. We saw small improvements each year, but it was around year five when we really saw the results of managed grazing.

What were some of our results from managed grazing?

- \* The soil was able to hold a lot more moisture. Prior to managed grazing, the water ran off the fields in small rivers when it rained. Now the small rivers no longer appear, even after a heavy rain. The grasses help the soil to absorb and retain moisture and keep the soil moister when the weather is warm and dry. The soil has a lot more organic matter and earthworms are plentiful.
- \* The grass species have become more diverse and there are almost no weeds. We started with a wispy blue grass that dies out early in the summer. Without doing any seeding, the pastures now have a large variety of grasses, including orchard grass, quack grass and clover. This diversity helps keep the pasture lush and green throughout the grazing season.
- \* The manure breaks down rapidly. Around the fourth year of grazing, Dave was walking the pasture and kicked a manure patty, something he often does to help the manure to break down faster. This manure patty was only a few days old and all crusty on the top. When he kicked it, the top flew off and there was almost nothing left underneath except a few strands and a lot of dung beetles. The patties get dung beetle holes in them now within hours after they are dropped by the cows. The dung beetles are much more active partly because we do not need to worm the cattle.
- \* The number of grazings and the thickness of the grass increased dramatically over the five year period. By not allowing the cattle to graze too long, they don't eat the grass down to the dirt or the new shoots, thus allowing the grass to recover and develop new growth much more rapidly. Leaving four to six inches of grass in the pasture also helps to keep the animals from acquiring worm infections.

In 2010, we were able to grow more animals and rotate them through the pastures more times than in any other year. The winter of 2010-2011 was long and snowy, but the pastures last spring were green and growing fast, so we are looking forward to an even better growing season in 2012!

*For more information on the Grazing Lands Conservation Initiative please contact Karen Hoffman at 607-334-4632 x116 or karen.hoffman2@ny.nrcs.gov. For assistance with planning or starting up a grazing system contact your local USDA-NRCS or county Soil and Water Conservation District.*



July 2004. We started with sandy soils and thin, nutrient-poor grass.



First time through May 4, 2010. The grass is just getting started for the season.

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Sustainable Agriculture Research & Education

Establishing Northern Honeybee Colonies

By Aaron Englander, UMaine graduate student



The vast majority of Northern beekeepers start a honeybee colony by purchasing a "package".

Erin Forbes of Overland Honey in Portland, Maine has an innovative idea for how northern beekeepers can establish healthy new colonies in time for spring pollination. Traditionally northern beekeepers rely upon packaged "Italian" breed bees from southern and western states. The package colonies tend to be stressed, have high pest and disease rates, and are poorly adapted to the northern climate. Some beekeepers use northern nuclear colonies ("nucs"), which to be healthier and better adapted, but are in short supply and not available until early-May, too late for spring pollination of many important fruit crops. Erin Forbes' innovative idea is to requeen packaged colonies with a northern-adapted queen in

June. In her SARE demonstration study, Erin evaluated the strength, survivability, and honey production of requeened packaged colonies compared to northern-produced nuclear colonies (aka "nucs") and southern-produced packaged colonies. Two years of results show that Erin's strategy of requeening packaged colonies is a promising method establish healthy new colonies for northern beekeepers.

Introduction

The yellow and black honeybee mailbox that marks Erin Forbes' driveway is the first sign that she is a devoted keeper of bees. Her drive off of an urban Portland street is wooded and feels rural winding up a hill and through dense vegetation for a quarter mile before reaching her pleasant home. Upon arrival at least a dozen hives, warmly painted with bee friendly shades of blue, green and yellow, are immediately visible in a pollination haven of flowering trees and wildflowers. The entire landscape of the 7-acre property is planted for the bee's palate and superb honey production: fields of perennial and annual native wildflowers, locust, linden, tupelo and apple trees, beach roses and clover-filled lawns.

Erin Forbes is a master beekeeper with 9 years experience. She tends roughly 70 hives in Cumberland County, Maine, and teaches apiculture for the Cumberland County Cooperative Extension.

The importance and necessity of honeybees is no secret. In Erin's words honeybees are a 'keystone species' that serve as a 'hinge-pin' for many other species. Erin says, "They pollinate plants and therefore provide food for many species up the food chain. Honeybees can be manipulated and are needed for pollination of commercial farms." However, over the past 10 years honeybees have suffered increasing health issues including varroa mites, exposure to pesticides, and Colony Collapse Disorder (CCD).

Problems Sourcing Honeybees in the Northeast

The main objective of the SARE project was to address major problems with sourcing of honeybee colonies in Maine and New England. The vast majority of Northern beekeepers start a honeybee colony by purchasing a "package," which is a shoebox-sized box containing three pounds of adult bees and an unrelated

Welcome to the Northeast SARE Spotlight! SARE (Sustainable Agriculture Research and Education) offers grants to farmers, educators, universities and communities that are working to make agriculture more sustainable - economically, environmentally, and socially. Learn about whether a SARE grant would be a good fit for you.

queen. Packages generally come from southern states (i.e. Georgia, Alabama, Texas) or California where the bees tend to be the Italian breed (Apis mellifera ligustica), which is not well adapted to northern climates. Other problems with packages are that the bees arrive stressed and rates of disease, parasite, and varroa mites are relatively high. Many colonies started from packages do not survive the winter.

The other supply option for northern beekeepers is a northern raised nucleus colony, or "nuc." Overwintered "nucs" are 5-frame mini-hives comprised of a queen and her daughters, pollen, nectar and honey. "Nucs" are better adapted to the New England climate than the package colonies because they are hybrids of northern breeds (Apis mellifera mellifera). As well, the bees are less stressed because they are from one colony that has been working together already. However, "nucs" are not available until early May, too late for early-season fruit pollination in New England. In addition, northern "nucs" are in short supply in New England: roughly 2,000 are available each year, compared to the demand for well over 20,000 new colonies. "Nucs" are difficult to transport (must be picked up by the beekeeper, not shipped through the mail), \$40-60 dollars more expensive per hive than packages, and have an increased tendency to swarm, which is colony level reproduction. Swarming typically occurs in the spring in healthy bee-hives when an older queen bee followed by a large percentage of her workers leave the hive in search of a new home.

The Research Question

So the question arises, how to source honeybee colonies in the northeast in a cost- and time-effective manner? Erin Forbes' idea of requeening a package hive with a northern queen is one promising alternative to the "treadmill of purchasing commercial packaged bees in the spring and losing the colony over the winter". The package hive is requeened in June when northern raised queens first become available. Honeybees live for only 60 days, so by September, the entire hive will be comprised of the progeny of the new northern queen: genetically northern breed bees, well adapted to the New England climate.



The vast majority of Northern beekeepers start a honeybee colony by purchasing a "package".

For the SARE project Erin investigated the colony strength, survivability and honey-production among colonies of requeened packaged bees, traditional commercial packaged bees, and northern "nuc" bees. In her project she tested 54 hives: 18 "nucs", 18 packages, and 18 requeened packages. All of the colonies were raised with identical new hive equipment, uniform feeding regimens, and overwintering techniques. The hives were evenly distributed in 4 different bee-yards over two years. Evaluation of the hives performance was based on disease presence, parasite loads, surplus honey production, and winter survivability rates.

Project Results

The results were quite promising. Many more of the package colonies (requeened and conventional) produced a surplus honey crop than the "nucs" (mostly due to the high rate of swarming in the "nucs"). Honey production by the 54 colonies was measured, even though first-year colonies are not typically expected to produce surplus honey. Only 13 hives produced surplus honey. Table 1 describes the breakdown and averages of honey production.

The second table presents hive strength and survivability as rated by Erin the April following hive establishment. Data from 39 hives (13 of each type) are presented because in the second year of the project one of the bee yards experienced a pesticide incident that removed a group of 15 colonies (5 of each type). Erin considered successful survival to be a rating of "strong" or "average" in early spring.

Over the two-year trial, the 9 of the 13 requeened package colonies successfully survived (69%) compared with 5 of the 13 conventional package colonies (38%). The northern nucs showed the highest survival rate (10 of 13 or 77%). Disease and parasite loads were higher in the packaged hives than the "nucs", not surprisingly leading to the higher mortality rates in those colonies.

Surplus Honey Production by Type of Hive			
Hive type	Number of hives that produced surplus honey	Total surplus honey produced (lbs.)	Average surplus honey per hive (lbs.)
Nucleus colony	2	168	84
Requeened package	6	461	77
Conventional package	5	538	108

Table 1

Hive Strength in April (number of hives in each category*)					
Hive type	Strong	Average	Weak	Dead	Disqualified**
Nucleus colony	7	3	1	1	1
Requeened package	7	2	0	1	3
Conventional package	2	3	2	5	1

Table 2. Results are reported for 13 hives of each type. The remaining 5 hives of each type are not included because they were at a site where pesticide damage was suspected. Disqualified colonies swarmed and did not successfully requeen.

Interestingly the requeened packages seemed to better handle the higher disease and parasite loads than the conventional packages. Greater disease resistance, genetic adaptation to the northern climate, and the management technique of "breaking the brood cycle" through the process of requeening may explain the increased rates of survival and strength of the requeened packages over the conventional ones.

Erin was pleased with her results and the outcome of the project. However, in an interview, Erin made it clear that "a bigger, more formal study is necessary. This study was small, and didn't 'prove' much...I can just say that these were my results with 54 colonies over 2 years. Somebody should do a 'real' study on just packages, requeened and not requeened based on my project; that would be worthwhile". Perhaps that will be the next SARE project. Looking forward, Erin stresses the importance of increasing the production of northern "nuc" colonies in New England, another potential SARE project for the northeast apiculture community.

Spread the Word

Overall, Erin feels that the outreach she has conducted conveying project has increased education and awareness for new and seasoned beekeepers throughout Maine and the northeast. Reflecting on the projects' influence upon apiculture, Erin said, "This was a demonstration project to get people thinking about where their bee colonies come from and the implications of their purchasing choices on bee health and vitality, regionally and nationally...I got so much good feedback, people loved it".

The passion, knowledge, care, intuition and foresight that Erin applies to her bee-keeping is truly inspiring and informative. When asked what the best part of the SARE project was, Erin responded, "The actual beekeeping. I fell in love with every single colony. Even the package (colonies), I had such a crush on them. It was ridiculous. This is why I'm a beekeeper".

Inside and outside the comb, this SARE project was an important step to solving major problems that restrict the sustainability, economic viability and overall success of northeastern beekeepers. With the continued hard work of Erin and other experienced apiculturists, the health of the bees and the production of their honey can improve every season.

Go here to learn more details about her study and results.... <http://mysare.sare.org/mySARE/ProjectReport.aspx?do=viewRept&pn=FNE10-694&y=2010&t=0>

Aaron Englander is a graduate student at the University of Maine. He may be reached at [aaron.englender@gmail.com](mailto:aaron.englender@gmail.com).

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Erin's entire 7-acre property is planted for the bee's palate and superb honey production.

Photos by Aaron Englander



# Small Farm Quarterly Youth Page

## Traveling with 4-H through Horticulture Contest

by Heather Tweedie, 4-H Horticulture Club, St. Lawrence County

I just got back from San Diego, California. Now, let me tell you how I got there. I live on an organic dairy farm with my family in a small town in Northern New York. I have been in the 4-H horticulture program for 8 years now. The first year I did the horticulture ID contest at our County Fair and I really enjoyed it. The next year I did the contest again at the County Fair and was put on the New York State Fair team for St. Lawrence County. I continued doing this for a few years. I also am in a 4-H Horticulture Club. Bill McKentley, my leader, takes us on walks through his nursery and shows us all of his plants. We hold monthly meetings at his nursery where he talks to us about plants.

When I was 15, I qualified to go to the national contest at the convention for the National

Junior Horticulture Association. The first year I went to Harrisburg, Pennsylvania. The next year I went to Cleveland, Ohio. This year I went all the way to San Diego, California. I had never been to California. My family and I traveled by train. I had a really great time and saw many new things. I was able to go to the San Diego Zoo, the biggest zoo in the country. I also went to Sea World!

I have a small business selling plants which I have started in our greenhouse from seedlings that I have purchased. I would like to expand the business next year. Without being in 4-H, I would not have been able to go to all these places and do all these things. Thank You 4-H for giving me these experiences!

For more information on how to join 4-H visit <http://nys4h.cce.cornell.edu/about%20us/Pages/JoinUs.aspx>

The Youth Pages are written by and for young people. Many thanks to the 4-H Teens from St. Lawrence County who contributed to this issue. We believe there's a bright future for young farmers in the Northeast. Whether you live on a farm or only wish you did, we'd love to hear from you!



Heather Tweedie at the National Horticulture Contest in San Diego

## 4-H and Farming

by Heather Tweedie, 4-H Horticulture Club, St. Lawrence County

Being born and raised on a farm has taught me many things. One of the most important is probably my work ethic. I hate to leave things unfinished, or not do my best at whatever I'm doing. I take my work ethic with me to school. My schedule is full and my classes give a lot of homework, but I try to never let my teachers down. I get my work done to the best of my abilities and because

of that I get good grades. This is all a result of my learned work ethic. I also involve myself in a lot of extra activities such as sports and clubs. One club that has given me a lot is 4-H.

I've been in 4-H for seven years and it has taught me a lot. I show cows every year. I have participated in public speaking competitions which have helped me be more open to giving presentations and speaking to groups. Just recently I spoke at a youth food summit

about farming. I've shown pigs and rabbits, as well as participated in other 4-H functions outside of the fair. 4-H helps me be a better leader. I am the president of the Kow Kraze 4-H club and I have helped at different events in leadership positions. 4-H is helping to prepare me for the outside world and helping me be a better, more well rounded person. I don't know where I would be today if it weren't for 4-H and the farm.

For more information on the 4-H Dairy Project visit <http://www.ansi.cornell.edu/4H/dairycattle>

## Dairy Farming and 4-H

by Mia Brown, St. Lawrence County

Growing up on a dairy farm and being in 4-H has given me some great opportunities. Doing chores on the farm has taught me about hard work. Through 4-H, I have been involved in the Dairy Bowl competition, representing my county at the regional contest for three years and last year at the State level at Cornell. I learned how to judge dairy cattle and compete at the local competitions at the St. Lawrence County and Hammond Fairs. Best of all, I have been able to show 6 different Holstein calves over my years in 4-H (I owned 3 of them). I have steadily improved my placing in dairy showmanship.

I now have goals for myself through the farm and 4-H. I have become interested in the Brown Swiss breed and look forward to getting my own Brown Swiss calf in November. I want to continue to improve in dairy cattle judging and dairy showmanship. I want to be on the St. Lawrence Senior Dairy Bowl Team in 2012 and would like to qualify for the State competition again. And my biggest goal is to be a large animal vet or run my own organic Holstein and Brown Swiss herd. All this has happened because of 4-H and living on a farm!

For More information on the 4-H Vet Science Project visit <http://www.ansi.cornell.edu/4H/vetsci>



Mia Brown showing her calf at the Hammond Fair

More information about the Cornell Cooperative Extension 4-H Youth Development program can be found at: <http://nys4h.cce.cornell.edu>

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Sadie and her Grand Champion Jersey at Hammond Fair

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**RESOURCE SPOTLIGHT**

# Save the Unicorns and Farm the Forest

## A Forest Farming Primer

By Bryan Sobel

Through forest farming, I can help to save the Unicorns (Aletrisfarinosa) and you can too. Forest farming is the cultivation of high value specialty crops under the forest canopy. For those of you not familiar with Aletrisfarinosa, also known by 'Unicorn Root', it's a perennial flowering herb found in open woodlands.

plants has in the past led to over harvest. Plants like the Lady Slipper Orchid, Wild Leeks (Allium tricoccum), American Ginseng, and yes, the Unicorn too, have all been put in danger of extinction due to over-harvesting and habitat destruction.

If you would like to learn more about forest farming, visit "The How When and Why" Forest Farming Resource Center at

<http://hwwff.cce.cornell.edu/> The Resource Center has a list of self-guided tutorials that include web text and images, video clips, power point presentations, and links to other on-line information sources.

Or visit MacDaniels Nut Grove during a field day or workshop! Our website is: <http://www.hort.cornell.edu/mng/index.html>

*Bryan Sobel is a Graduate Student at Cornell University, specializing in Forest Farming and Food Quality. He would like to promote a transition to a sustainable agriculture society with roots in cultural heritage. He can be reached at [bds229@cornell.edu](mailto:bds229@cornell.edu)*



Mushrooms are a great forest product that can supplement your farm income.

Photo by Dhwani Wiman

Here in Ithaca, NY at Cornell University, we are developing an educational, demonstration Forest Farming site called the MacDaniels Nut Grove. This site incorporates specialty Hickory trees (Carya sp.) using selections grafted by a former professor, Dr. MacDaniels, that were a part of cultivar trials over half a century ago. These Hickories, mixed with Black Walnuts (Juglans nigra), make the upper canopy portion of our forest farm. The second layer, below the canopy, consists of trees like Paw Paw (Asimina triloba), Elderberry (Sambucus sp.), and Service Berry (Amelanchier sp.). The third layer consists of trailing canes and small shrubs like Aronia, Currants (Ribes sp.), and black cap raspberries (Rubus occidentalis). The lowest level of our forest farm contains perennials such as American Ginseng (Panax quinquefolius) and Goldenseal (Hydrastis canadensis), as well as various species of mushrooms, like Shiitake (Lentinula edodes). We have also been able to incorporate ornamental plants such as two species of the endangered Lady-Slipper Orchid (Cypripedium sp.). While these are just a handful of species we are exploring on the research farm, you local cooperative extension office may be able to suggest varieties that are right for your woodland environment and farm plan.

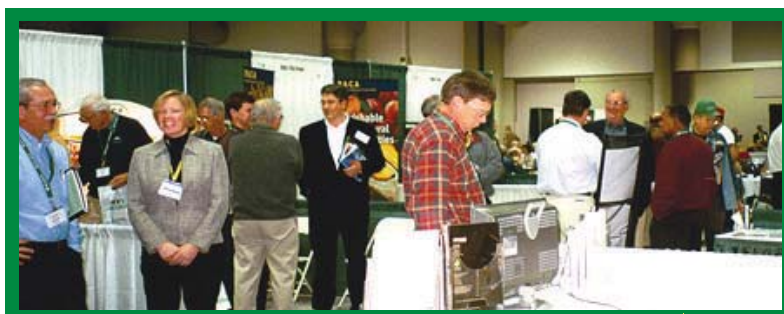
Collectively, species grown under the forest canopy are often referred to as Specialty Forest Products. These niche products have multiple uses: culinary, medicinal, and cultural. If you decide to incorporate SFP's into your farm plan, consider starting out on a small-scale until you have gained an appreciation for the ecology behind the species you are working with. Lack of sensitivity or knowledge for the proper cultivation and harvest of forest



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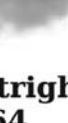
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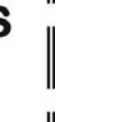
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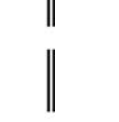
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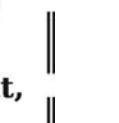
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**LOCAL FOOD AND MARKETING****Faces of our Food System: FarmieMarket**

Get to know a local food distributor in our new 2012 interview series

By Becca Jablonski

Over the past decade, direct marketing has become very popular, and for good reason. Selling directly to the customer brings back a higher return and the satisfaction of a personal relationship, among many other advantages. But the time and talent to show up in person, peddling your products one by one, isn't always the most efficient way to make sales. Meanwhile, as the local food system continues to explode, many distributors or 'middlemen', are sprouting up to help get the small producer's products to market. Selling wholesale to the right distributor can save on the costs of direct marketing and move a larger quantity of product in an efficient manner.

Who are these distributors? They are a diverse crowd using new models and reviving old ones. We'll be getting to know a different one each issue, so that you can get familiar with the methods these "middle" entrepreneurs are using to move local foods to markets and decide if selling to a distributor is right for you!

For our first profile, Becca Jablonski spoke to Sarah Avery Gordon, the founder and owner of FarmieMarket.com. FarmieMarket.com is an online farmers' market that allows customers to place orders and have local food delivered to their door. FarmieMarket.com started in Albany County, NY and has now spread to Schenectady, Rensselaer and Saratoga Counties. The goal of FarmieMarket.com is to keep small farms in business by limiting their costs associated with marketing.

**Q: Why did you start FarmieMarket.com?**

A: I started marketing products for my family's farm online. My family's farm was struggling after my mother, the farm's business manager, passed away, and I didn't want my dad to have to take an off the farm job. So, I set up a website and a facebook group. In the first month our sales doubled. More of our farming friends were interested in my help marketing their farms, so I set up a central marketplace-Heldebergmarket.com. We started with 8 producers-mostly friends I knew in the area-people that made really quality products.

When I started talking to more small farmers, I found that many experience the same barriers marketing their products through weekend farmers' markets. Many small farms are really mom and pop operations, and for them to have to sacrifice one or two members of the farm to go to farmers' markets (which may be all of the farm labor), it is just too much. Farmers' markets in the capital district often have really high fees - like up to \$600 - which can also be a barrier for some people. Plus, the more successful farmers' markets in our region take place in the summer, when people like my dad are too busy bailing hay. My dad would love to go to winter markets, but many don't have enough foot traffic. By grouping small farms together and marketing our products through a central website we can gain some synergy and overcome many of these barriers.

**Q: The original FarmieMarket was the Heldeberg Market. Why did you decide to expand?**

A: Because I had people calling me from all over the Capital Region, but I didn't have the ability to work all of them into my Heldeberg Market schedule. In wanting to serve more farmers and more customers, I made the decision to divide and conquer. Now I have three FarmieMarkets, and serve each territory on a different day.

**Q: What has the response from customers been?**

A: Awesome! I have been getting a lot of word of mouth referrals. I have picked up a lot of customers that are very steady - they order every week or every other week.

**Q: It must be difficult to operate three markets. What are your biggest obstacles to business efficiency?**

A: It's a lot of juggling, but I've been really fortunate to use technology to make it efficient. I set up a program that automatically tallies my orders each week and emails farmers their sales reports. The farmers get the products ready and bring them to the drop site and I don't have to worry about anything. This way I don't have to email producers in the middle of the night - the technology is working while I am sleeping.

**Q: Wow, you seem to be really computer savvy. How did you learn to set up an online market?**

A: We had a computer in the house at a really early age. My grandfather bought a computer in 1987! I have never had formal computer training, but I have good intuition about how to use it and how to figure things out.

**Q: Do you have any plans for further expansion?**

A: I do actually. I have received requests from all over the country. A few national farming blogs have picked up on the market - The Greenhorns (<http://www.thegreenhorns.net/>) and Seedstock (<http://seedstock.com/>) have both run articles on the market. The FarmieMarket concept is really gaining traction, so I am actually going to organize an educational series this winter to give entrepreneurs the skills they need to set up FarmieMarkets in their area. My plan is to keep everything under the FarmieMarket umbrella, but each individual market will have its own local flavor - in Rensselaer County, for example, the market is called Uncle Sam's Farmer Stand since it is the birth place of Uncle Sam, but it is still a FarmieMarket.

**Q: What types of products do you sell through FarmieMarket.com?**

A: We have a full range of grass fed beef, grain finished beef (as long as the grain is grown on the farm), pastured pork, lamb, eggs. I am really trying to focus on value added products. We have lots of seasonal vegetables. I work with a few farmers who have greenhouses and high tunnels so we can offer products year-round. We are also diversifying into prepared foods. I am working with a local chef on this. Dairy is coming this spring.

**Q: Are there products that you have been unable to find (I know there are always farmers looking for new product ideas)?**

A: Yes, there are. That is one thing that is cool about the market - I have all of this information about what we have available/how much farmers produce, and I have done a bunch of research about what could be grown in the area and isn't. I had a meeting for my farmers last winter and we quickly realized that collectively we were growing too much zucchini. There are lots of products I would like to try to get - more beans for example. I recommended growing beans to a farmer I work with; he planted kidney, black and yellow beans this summer, and has already sold out.

**Q: If farmers are interested in selling product through FarmieMarket.com, how should they contact you?**

A: They can actually go to the website, and on the front page of the website there is a button that says "Farmers: Join the Revolution!". They should print out the application, fill it out, and mail it to me and I will get back to them as soon as I can.

Becca Jablonski is a PhD student at Cornell University conducting food systems research. She may be contacted at [rb223@cornell.edu](mailto:rb223@cornell.edu). Thanks to the following funders for their support of local food distribution research: the Cornell Center for a Sustainable Future, NESARE, and the Cornell Small Farms Program.



Sarah Avery Gordon Making a Snowy Delivery

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**DAIRY**

# Howland Dairy Benefits from Whole Farm Analysis Project

By Lisa Fields

The Whole Farm Nutrient Analysis Program (WFA) came along at the right time for Rob Howland of Candor, NY. Howland's 74 cow dairy is one of eleven farms in the WFA project, an initiative of Cornell's Nutrient Management Spear Program (NMSP). The WFA identifies opportunities for change in nutrient inputs or allocations that could benefit the environment and the farm's bottom line. The nutrient efficiency of a farm's component areas are measured and analyzed with an integrated approach.

Howland described his reaction when approached by his Extension Field Crops Specialist, Janice Degni to participate in the project. "I immediately said that I would. I was aware of the concerns in society about the environment, and as a dairy farmer, business economics are always a personal concern. This farm has a fairly large land base, and I was questioning where in the crop system I would get the best return from my time and dollars."

There are several stand-alone tools used to evaluate a farm's nutrient status that tend to analyze a particular sector of the farm. An objective of the WFA project is to combine those tools and extract the data that are most essential for assessing nutrient status and providing valuable information to the farmer.

Patty Ristow, Extension Associate with the NMSP, explained the WFA process, "The first step is to compile accurate and relevant information to analyze the farm's nutrient status. On the field side this consists of three key tools: a Whole Farm Nutrient Mass Balance (NMB), soil fertility analysis of all the fields, and nitrogen measures termed adaptive N management in corn fields."

The NMB provides a mechanism for tracking nutrient use efficiency across the whole farm year after year. The analysis covers four farm production sectors: milk, animals, crops and feed. The NMB diagnostic reports quantify the net major nutrients that remain after subtracting nutrients exported from those imported to the farm.

The year-end data summary requires routine record-keeping for each production sector. That can make it challenging to com-

plete, but Ristow noted that its role is crucial. "The NMB diagnostics have helped illustrate to farm management teams and environmental regulators that our farms' management changes are greatly reducing the amount of nutrients that could affect water resources. By tracking changes over time a powerful message is delivered from the whole farm perspective."

Howland commented further, "At first I didn't find the NMB to be useful. Getting the data together was tough, because it didn't fit with my record keeping system. After about two years I made some adjustments in tracking forage inventory, and that's helped both the NMB data needs and my feed system. I started tracking my baleage more specifically as to time of cutting and the field it came from. As yields have increased from the same number of acres, sales of baleage are taking nutrients off the farm as well as providing income. I now view hay quality as a nutrient efficiency issue as well as an economic one. The NMB also shows that I buy the same amount of feed as before the project, but I make more milk now from 74 cows than I did several years ago with eighty." A complete stall renovation in Howland's barn also contributed to increased milk production from fewer cows. The integration of forage quality with crop exports and increased milk sales has led to a reduction in nutrients remaining on the farm.

Ristow commented on the diagnostic impact of the program's approach to soil nutrient analysis. "WFA summarizes and displays the results across an entire farm. This shows a clear picture of where approximately 70% of nutrients brought onto the farm as feed ultimately end up in the form of manure. Uneven distribution of nutrients on cropland indicates an opportunity to change manure spreading and fertilizer application practices."



During team meetings farm data were reviewed to identify nutrient status of the farm and potential opportunities to improve.

Howland noted that the soil fertility information from the WFA was immediately useful. "I knew those fields close to the barn would have high nutrient levels, but the project showed me those levels over time. I have a much clearer idea of how much manure should or shouldn't go on the various fields. Some of our hill fields are nutrient hungry, and now we prioritize spreading there whenever the weather allows."

Ristow noted the impact of Howland's participation on the project's development. "Rob's input has been a tremendous help in creating report formats that are useful management tools. His feedback was vital, because the information must make eco-



Rob Howland used the Whole Farm Analysis tools to identify current nutrient status of the farm and to identify potential opportunities to improve.

omic sense to him and clearly benefit his business. If farmers can't readily draw conclusions from the information we provide, it's unlikely to be applied to management decisions."

The project takes nutrient management a step farther by utilizing two adaptive management tools for nitrogen in corn fields. The Illinois Soil Nitrogen Test (ISNT) can be taken prior to crop planting and predicts the soil's ability to supply N to the crop by determining the amount available to mobilize from the pool of organic N. The Corn Stalk Nitrate Test (CSNT) is a nitrate analysis of the bottom portion of the corn stalks at harvest time. It tells the story of how the prediction of N supply and use of fertilizer and/or manure played out in reality. These two tools together allow for fine-tuning of N applications over time and on a field by field basis.

Looking to the future, the program hopes to integrate economic measures from Cornell's Dairy Farm Business Summary into the WFA diagnostics, identifying factors of profitability that correlate with nutrient efficiency. This could provide financial documentation to the benefits seen by WFA participants. Ristow commented: "The changes made as a result of tracking the NMB and fine-tuning nutrient distribution and nitrogen use on corn often result in reduced purchases and alleviate excessive nutrient levels that may affect water resources. It's a win-win scenario for the farm's economics and the environment."

Howland summarized his opinion of the WFA project. "Participating in this type of project raises your level of consciousness as it puts the farm's nutrient use facts in front of you. If something looks high, you have the tools to consider how to change that." Noting the fit between the WFA project and his business philosophy, he added, "It's important to know what the issues are that can affect your business. You can't farm in a vacuum."

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## About the Nutrient Management Spear Program

The Nutrient Management Spear Program (NMSP) is an applied research, teaching and extension program for field crop fertilizer and manure management on dairy and livestock farms. It is a collaboration among faculty, staff and students in the Department of Animal Science, Cornell Cooperative Extension, and PRO-DAIRY. Our vision is to assess current knowledge, identify research and educational needs, facilitate new research, technology and knowledge transfer, and aid in the on-farm implementation of strategies for field crop nutrient management including timely application of organic and inorganic nutrient sources to improve farm profitability while protecting the environment. An integrated network approach is used to address research, extension and teaching priorities in nutrient management in New York State. For more information on NMSP projects and extension/teaching activities, visit the program website (<http://nmsp.cals.cornell.edu>) or contact Quirine Ketterings at [qmk2@cornell.edu](mailto:qmk2@cornell.edu) or (607) 255-3061.



**GRAZING**

# Why I Graze

By Sally Fairbairn

*This article was one of four winning entries in a writing contest sponsored by the New York State Grazing Lands Conservation Initiative (GLCI). GLCI is led by a Steering Committee of farmers and agricultural professionals to promote the wise use of private grazing lands, and is funded by the USDA-Natural Resources Conservation Service.*

I care for open and short bred dairy heifers for a friend of ours. He may own them but they are "mine" while they are here. I consider myself an environmentalist and value prescribed grazing for the good environmental benefits. I know how much healthier cattle are that graze in a carefully managed system. But the real reason I am so enthusiastic about being a grazing farmer is because it is so good for me. I love dairy cattle, but my days of milking them are all over. By boarding heifers I have to take walks up and down hills; be out in the fresh air and sunshine (or rain, freezing rain, snow, whatever.) Otherwise, it would be too easy just to hang about my porch and gardens and lose touch with the wonderful place that I live in.

If dairy farming continues to be part of the agricultural base in Upstate New York it will be because prescribed grazing has been adopted by many farmers. It makes economic sense to have cows harvest as much of their forage as possible, especially with today's high energy costs. But you need to be a top manager to get top tier results. That is why it is so important to have help available.

In 2011, we had a cool, damp spring that was good for lush grass growth. One of the biggest problems in intensively managed rotational grazing is understocking. My usual carrying capacity is about 22 - 25 open heifers on my hilly, thin-soiled 25 acres of pasture. My numbers around mid-spring were well below that. I had to be careful not to let the grass get ahead of me and wind up with hay - very poor grazing!

I hate cutting hay on my pastures, but with so few heifers it is my only way of preventing the ungrazed grass from getting too mature. Most of our pastures are too steep to be mechanically harvested efficiently and safely, so we tend to harvest the same one or two every time we get in this bind. When I give over an area for harvest it means fewer passes through with my heifers, therefore not enough animal impact, not enough manure deposited. Whining isn't my usual way, but I hate to see good pasture go to waste.

Our water system is above ground with miles of black plastic pipe hugging the stone walls, taking the water from a spring on the top of the farm (over 2000') to the many paddocks below. It is so steep we have a couple of tanks that serve as reserves, but whose real purpose is to break the pressure so the pipes are not blown apart. We placed the pipelines through wooded areas as shortcuts. In the fall I open all the valves and drain the system; in the spring I put it all back together. The springtime part is one of my favorite jobs on the farm. I count on those hikes to bring me closer to the woody environment that surrounds my pastures. I'm on the lookout for Dog-toothed Violet, and Early Blue Violet, which could be a

sign of not enough lime. Seeing the Violets reminds me of the summertime perfume of wild thyme in certain places - that definitely means not enough lime.

I usually move my heifers every day. That's quite intensive management for rotationally grazing open heifers. It is one of my ways of dealing with understocking. By taking an area out of the grazing rotation early to be harvested, I am forced to better utilize what is left. Also, I feel that I need to check them daily just to be sure everything is OK. I've been at this long enough (about 18 years) to have had lots of problems, but most of them of my own making.

While understocking can be a big problem, my biggest worry is a drought. I can do a lot of things, but I can't make it rain! My success as a grass farmer has been built on adequate rainfall. Here in the Catskill Mountains we can count on that nearly every year. Sometimes it's a bit of a stretch between thunder showers in July, but plan a picnic and you can usually attract an afternoon soaking. During those dry times I try to extend my rest time by feeding some hay. I think I'm doing the right thing, but the heifers aren't impressed, nudging a bale until it rolls down the hill into a fence, and then grubbing the sward a little closer.



*I don't measure anything, but I pay attention to how my heifers look. Are their bellies full? Do they seem happy?*

By changing paddocks often, I maximize my grass and protein yield. I then add some (very expensive) low protein grain, fed on my daily trips to the pastures. I don't try to get technical about ADF and all that stuff. I don't measure anything, but I pay attention to how my heifers look. Are their bellies full? Are they getting bigger? Gaining weight? Do they seem happy? If they are not happy in a pasture, they are not full and there is a lot of uneaten grass. If heifers are not happy, you can leave them in there for several days and they still won't eat what they don't like - they'll keep chewing on the good stuff and really hurt its potential for regrowth. I've learned: if they won't eat it, mow it and leave it. Better stuff is encouraged to grow through the mulch that you will have left behind.

I'm getting old enough (Social Security is only a year or so away) that I can choose how I spend my time. I blend grazing heifers with watching my grandkids' softball games, babysitting as needed, volunteering for the organizations that really mat-

ter to me, lots of flower gardening, other farm chores and of



*By changing paddocks often, I maximize my grass and protein yield.*

course, spending time with my hubby of 40 years. I'm a happy person, living on a farm surrounded by green pastures, sparkling streams, and clean young dairy animals. A bit of heaven in the Catskills.

*For more information on the Grazing Lands Conservation Initiative please contact Karen Hoffman at 607-334-4632 x116 or karen.hoffman2@ny.nrcs.gov. For assistance with planning or starting up a grazing system contact your local USDA-NRCS or county Soil and Water Conservation District.*

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## Small Farm Quarterly is Recruiting!

We are looking for several new members to join the Small Farm Quarterly Editorial Team, and we are always looking for new writers and photographers. We are especially looking for editors and writers from outside of New York State, so that we can improve our coverage of New England and Pennsylvania small farm issues and innovators. All SFQ editors and writers are volunteers. If you're interested, please contact Violet Stone at 607-255-9227 or vws7@cornell.edu



HORTICULTURE

Pretty in Pink:  
Grow Edible Ginger!

An introduction to growing and eating edible ginger (*Zingiber officinale*) for fun and profit

By Susan Anderson

The sickle makes its way quickly and quietly through tall, healthy green foliage. The air smells pleasantly of ginger and earth. I hear the sound of roots giving way as Hugh Johnson and Dan Kelly pull hands of young ginger from the soil. Bright pink bud scales adorn the creamy white rhizomes of the freshly dug crop. The farm I am visiting is Puna Organics on the Big Island of Hawaii. Baby Ginger is truly beautiful in paradise but it can grow well anywhere in the United States.

Hugh and Dan are growing edible ginger. It is used as a spice, a medicinal herb, and flavors many teas, drinks and confections that we commonly consume. Current scientific literature points to ginger (and turmeric, the spice high in curcumin) as having cancer-fighting properties. These properties are owed to the phytochemical compounds in ginger, namely gingerols, shogaols and zingerone, that give ginger its spicy and medicinal qualities. Aside from the anticarcinogen compounds in ginger, studies have proven that ginger is effective in treating nausea, motion sickness and morning sickness. Ginger, as well as turmeric, has long been used in Ayurvedic medicine (holistic and natural medicine of Hinduism that teaches healing and prolonging of life). Both of these rhizomes are easy to grow, cultivate and market.

In addition to growing and marketing mature and immature edible ginger, Puna Organics is also growing seed ginger, much to the advantage of farmers on the mainland! This seed is certified organic, disease-free and ships from the farm in Hawaii right to those who order on the mainland that want to try their hand at a phenomenal crop. Hugh and Dan are always

seeking new varieties of ginger. Their newly developed Ruhi (pronounced Rue-hee, meaning "soul" in Urdu, it is the name of a poet friend of Hugh's) is a selection Hugh made over the last 15 years of ginger from Indian origins. It initiates foliage growth quickly, makes larger rhizomes quicker and is, thus, more suited to the shorter season in the continental U.S. Ruhi has the characteristic pink bud scales when harvested for baby ginger. At maturity the flesh is yellow at the growing tips with blue flesh at the base of the rhizome. Ruhi seed pieces will be readily available for the 2012 growing season. There are limited quantities of a Hawaiian yellow ginger and Thai ginger (galangal). Puna Organics also offers seed for turmeric -- a variety that is robust in rhizome growth, yield, gingerols and curcumin... but that's a whole other article in itself!

Ginger in the grocery store is grown to maturity for anywhere from nine to eleven months. The ginger that we can grow in the continental United States is harvested earlier, during the young stage of rhizome growth, at about 5-8 months (referred to as Baby Ginger or young ginger). Baby Ginger is delicious! It has the characteristic bite of ginger without being hot or overpowering. The texture is akin to hearts of palm, tender yet toothsome, because the thick skin and tough fibers running through it have not yet formed. In addition to all the other things that can be done with mature ginger, immature ginger can be pickled and candied. Ginger pickles are a splendid accompaniment to Sushi, cooked greens, grilled chicken, and grains. And, last but not least, the skin accented with neon pink scales, stands out like a beacon at market!

For these reasons Baby Ginger is highly appreciated by chefs and consumers alike and com-



Susan Anderson with Baby Ginger in Hawaii  
Photo by: Dan Kelly



Harvesting Baby Ginger in Hawaii  
Photo by Hugh Johnson

mands a high price. Baby Ginger is perishable and cannot be shipped all over the world like mature ginger, but is great purchased locally. It lasts about two weeks at room temperature after being harvested, washed and trimmed. After a couple weeks it will have lost its neon look but is still fine for processing or home use. It can be frozen for later use, too. Bring frozen rhizomes out of freezer to refrigerator to thaw for use of entire rhizome; otherwise, grate frozen rhizome into recipe and put right back into the freezer.

Ginger is susceptible to some diseases and it has cultural requirements that are different from typical vegetable crops. However, once the learning curve has been surpassed, and even



Baby Ginger With Tops Trimmed  
Photo by Dan Kelly

during, there is a sense of tropical wonder when tending this crop. It might be the smell as one walks by the plants, it could be the rhizomes peeking out of the soil surface waiting to be hilled, or the splendor of pulling something pink out of the soil could be the climax for some. For most growers, though, the reaction that they get at market, from chefs, from wholesalers, is priceless. Customers stare in awe at the pink rhizomes and ask, "Is that ginger?"

My visit to Puna Organics was simple -- to learn the nuances of growing edible young ginger and pass it along to farmers on the mainland. Hugh Johnson has been farming organic ginger for nearly 20 years. Dan Kelly, his business partner, has been in the horticulture business for over a decade and working with Hugh for almost five years. Hugh and Dan together have forged a way to offer clean, organic ginger seed to the masses. Edible ginger is a delight; discover for yourself!

Susan Anderson owns East Branch Ginger, which represents Puna Organics on the mainland. Ginger seed pieces can be ordered from East Branch Ginger's website [eastbranchginger.com](http://eastbranchginger.com) or by calling 207-313-4358. Seed is shipped directly from the Big Island of Hawaii right to your door.

DAIRY

Raw Milk, "Moo-n Shine",  
and Risk Management

By Jason Foscolo

When planning to profit from an agricultural activity like selling raw milk, farmers often fail to take seriously the risks of regulatory non-compliance. Meteorological or market risks figure far more prominently in the minds of farmers everywhere. Yet the business of food production, and dairy in particular, is one of the most highly regulated industries in the United States. Compliance with production regulations is itself a form of risk management.

Within New York state, the on-farm sale of raw milk is legal. Permits are available from the Commissioner of Agriculture and Markets which allow the permit-holder to sell raw milk provided that a number of conditions are met. Sales must be made directly to a consumer, and must also be made on the farm where the raw milk is produced. Further, a sign must be conspicuously placed near the point of sale which reads: "NOTICE: Raw milk sold here. Raw milk does not provide the protection of pasteurization." (Chapter 1, New York Code of Rules and Regulations, Section 2.3).

The on-farm sale requirement severely limits the market reach of a raw milk operation. New York dairies may be tempted to circumvent these restrictions using a variety of novel legal and organizational arrangements. These methods are colloquially known as "moo-n shine" strategies and have recently received significant press cov-

erage on National Public Radio and various other media outlets. An example of such a strategy uses a "cow share" program in which shares of a cow or cow herd are sold to members of a "corporation" of consumers in exchange for a cash payment. "Dividends" are paid to membership in raw milk and raw milk products like cheese and yogurt. In another raw milk scenario, producers label their bottles as "pet-food", but sell them with the tacit knowledge they are unquestionably destined for human consumption.

The media coverage of these methods has been highly deferential and uncritical. This can be a problem for a New York based dairy operation because the coverage oversimplifies the very complex and thorough web of regulations which govern the sale of milk in this state. It would thus be unwise for any New York based dairy operation to adopt one of these arrangements without very careful consideration. The laws regulating the sale of milk products in the state of New York are written quite comprehensively and prohibit these types of "moo-nshine" arrangements.

The dairy laws are written broadly enough so that the New York State Department of Agriculture and Markets may regulate every transfer of raw milk, regardless of the underlying economic transaction. It is required that every person who "offers for sale or otherwise makes available raw milk for consumption by consumers shall hold a permit to sell raw milk issued by the commissioner." "Otherwise makes available" for

consumption covers other types of raw milk transactions which may not look like the narrowly defined retail model. The law more broadly regulates the simple transfer of raw milk between different parties, regardless of how the money moves back and forth between the buyer and the dairy. Under this regulation, even the gifting of raw milk may be a prohibited transaction.

In 2010, the Appellate Court for the Third Judicial Department<sup>1</sup> used this language to rule against the cow-share arrangement used by Meadowsweet Dairy to distribute raw milk products to its membership. The court determined that distributing milk via a cow sharing scheme fell within the meaning of the phrase "otherwise makes available" for consumption.

Courts have yet to review whether pet food labeling schemes can effectively mask the sale of raw milk for human consumption. Given the comprehensive drafting of the statute, it is prudent to assume this stratagem will fail because of the "otherwise make available" language in the regulation. Mislabeling laws pose a further concern for "pet food" method of distribution. Food is mislabeled or misbranded if its labeling is false or misleading (Agriculture and Markets Law § 201(1)), subjecting dairies to further regulatory liability.

Violating the raw milk laws can have quick, ruinous financial consequences for a suspected dairy. The Department of Agriculture and Markets has a vast amount of regulatory authority to interfere with the operation of dairies which do not comply with the raw milk laws. Under Section 20 of the Agriculture and Markets Law, agents of the commissioner "shall have full access" to any farm, factory, business or facility suspected of violating the raw milk or any other Department regulation. (Agriculture & Markets Law § 20).

Section 202-b of the law also empowers department agents to seize, impound, or destroy food products which may be unsafe, adulterated, or even mislabeled. (Agriculture & Markets Law § 202-b).

A discussion of whether laws prohibiting the sale of raw milk on a wider basis are over-bearing and unnecessary has no place in a thorough, dispassionate risk management analysis. The dairy laws of the state of New York, as well as the power of state officials to investigate and impound the property of those suspected of violating them, are significant obstacles to the off-farm sale of raw milk. Be skeptical of any scenario that promises the law to circumvent the law, and accurately assess the potential risks of your agricultural activity.

<sup>1</sup> The Third Department covers the counties of Albany, Columbia, Greene, Rensselaer, Schoharie, Sullivan and Ulster

Jason Foscolo is a general practice attorney specializing in food and agricultural law issues. If you would like to talk to him about the legal aspects of making great food, including raw milk, he may be reached any time at (479) 799 - 7035, or at [jason@jasonfoscolo.com](mailto:jason@jasonfoscolo.com).



Don't get too relaxed about regulations!  
Photo by Lorraine Lewandrowski



**LOCAL FOODS AND MARKETING**

# The Challenges and Rewards of On-farm Poultry Processing

By Sam Anderson

When's the last time you saw "locally grown" stamped on a chicken at the grocery store? How many restaurants do you know that tell you who raised the duck on their menu? The market is out there—pasture-raised broilers can fetch over \$30 per bird—but the supply isn't keeping up. So what's the holdup?

If you've ever tried to raise and sell poultry for meat, you already know the culprit: processing. USDA allows farmers raising fewer than 20,000 chickens or 5,000 turkeys per year to process their own birds on-farm. It's up to states to decide how much to regulate beyond that. Some states, like New Hampshire and New York, are relatively lax; others, like Massachusetts and Connecticut, ask more of producers before allowing them to process and sell poultry on their own farm.

Until recently, most small poultry farmers in Massachusetts have chosen between two options: pay up to build and license their own on-farm slaughter facility, or operate under the radar. It was only two years ago that a reasonably close USDA facility came online, but even that one is in Vermont. The other option is to rent a mobile poultry processing unit, or MPPU, essentially a "chicken slaughterhouse on wheels" that travels to individual farms (with the blessing of the state Department of Public Health), allowing farmers an avenue to legally process and sell their own birds. Several MPPUs are in various stages of operation around the Northeast. In Massachusetts there are two state-approved "mainland" units managed by New Entry Sustainable Farming Project and New England Small Farm Institute, and another operated by Island Grown Institute on Martha's Vineyard.

While on-farm processing is available to producers who may not have any other (legal) way to bring poultry to market, many producers have shown a hesitation to get involved with it. There are three main challenges that scare farmers away from legal on-farm processing—and possibly, in turn, from starting a poultry business at all.

The financial commitment. If you are building your own facility to meet regulatory standards, depending on what you already have in place, you could find yourself running up a bit of a bill.

Anytime you spend \$20,000 (and it could be less or quite a bit more, depending on your setup), it's obviously a commitment, and that could be a problem if you aren't ready to say with certainty that you will be running a poultry business for at least the next few years. However, if you are able to make that commitment, building your own facility may save you a bundle in the long term compared to hauling each batch to a processing plant. It also enables you to process smaller batches throughout the season rather than concentrating your birds into three to five larger batches, saving you both transportation costs and freezer space.

Part of the idea of renting an MPPU is to avoid the financial commitment of building your own facility. Producers sometimes balk at the rental fee and, in Massachusetts, the \$225 annual cost of a state slaughter license. The new MPPU's rental fee in 2011 was \$175 per use for 100 or fewer birds, adding \$25 for each additional 50 birds (\$200 for 150 birds, \$225 for 200 birds, etc.). This means that in order to process three batches of 150 birds, we paid a total of \$825 in rental and license fees. This sounds like a lot at first, but it only comes out to \$1.83 per bird; even adding the costs of ice, utilities, assorted supplies, and transporting the MPPU, we still came in well under the \$5 per bird (plus transportation) we would have paid at the nearest USDA facility.

The regulatory hassle. In states like New York and New Hampshire, this may not be a big issue; in Massachusetts, it often is. In order to have licensed on-farm poultry processing, even with state-approved MPPU, the producer must apply for a state slaughter license with the Department of Public Health and get approval from the local Board of Health. We had to do it ourselves this year, and yes, it's a bit of a hassle. However, the upshot is that once you get over that initial hurdle, it gets much easier. If your alternative is to go out behind the barn and process on the down-low, you can't sell those birds at a farmer's market or farm stand, and you run the risk of getting in trouble—a hard risk to quantify in a farm business plan. Producers who are already doing this sort of processing may be worried that they'll get in trouble if they go to the regulators to ask about how they can become licensed, but we have found that the regulators are much less interested in busting well-meaning farmers than in helping them.

led to the purchase of a 227 acre plot of land, of which only 7 acres was immediately farmable. The rest was either wooded or not properly drained. "My grandfather was in the produce business and my grandmother and mother always had a garden for the household table. However, that was the extent of my farming knowledge or experience."

When asked why he picked New Hampshire, Joe simply stated, "It was close to family and that was important to me." With his work cut out for him, he knew a close support network would be needed as well. The most difficult tasks he anticipated were land clearing and soil management. Turning 7 acres into 13 productive acres of fruit and vegetables with an additional 10 plus acres into hay crop took approximately 6 years.

He adopted online marketing awareness trends by building the farm website, <http://www.pustizzifruitfarm.com>, and creating a Facebook presence. Now into his third season of selling, Joe hit an unanticipated challenge. "People have a lot of choices ranging from their own gardens to supermarkets. I needed to give them a reason to make the visit out to my farm."

The challenge of attracting more farm stand traffic led to his ever growing agri-tourism business. It isn't enough to provide someone with a fresh off the vine tomato; they also want an experience to go with it. Joe considered the ever popular corn mazes and outdoor sporting events. By networking with a local goat farmer, he came up with the idea of a haunted goat hike: You hike up the hill to



Massachusetts' newest Mobile Poultry Processing Unit saw its first year of operation in 2011. Photo by Sam Anderson

The logistical hassle. There's no way around it: processing poultry is a pain. That's a point which cannot easily be massaged. Michael Pollan did a nice job of idealizing the do-it-yourself approach in Omnivore's Dilemma, but the truth is that slaughtering, plucking and eviscerating a chicken is an inherently messy job. However, farmers are as equipped as anyone to deal with that aspect, and with the right people, processing day can actually become a sort of unorthodox, character-building social event. Pete & Jen's Backyard Birds in Concord, Mass. ("Jen" happens to be New Entry's director, Jennifer Hashley) draw crowds of 20 or more volunteer helpers each processing day, from all walks of life. At our own processing days, we attracted 8 to 12 volunteer workers by making it an educational event.

The bigger issue is the stress involved in ironing out the details before processing day: ordering supplies, coordinating workers and customers, transporting and setting up the unit (if using an MPPU), and dealing with all the little things that seem to come up right before processing day. It's easy to get anxious about something going wrong on processing day, but it seems that your best bet is to make a list, check it twice, and then accept the infallible golden rule of processing day: that whatever you do to prepare, something will not go according to plan. All you can do is be ready to deal with it.

I may not be painting a very rosy picture, but believe it or not, there are also upshots to the experience of processing your own birds. For some, the biggest advantage is the complete transparency of it. As the producer and the processor, you control every step of the way, and you can see to it that the job is done to your standards. That transparency can be an important selling point for your customers, too, and can even bring you a bit of attention: the last two seasons, the four main producers using the MPPU have all been featured in a news story, from the local paper to NPR.

It may sound sentimental, but one of the most valuable aspects of processing your own birds is

the pumpkin patch where you pick your pumpkin and have the goat haul it back for you. Along the way there are fun and educational stops. Everyone has a good time, including the goats that get loads of petting and treats. Pustizzi Farm now has 3 goat related events a year, a haunted farm event and maple sugar weekends.

Joe realized, "The local market demand for fruits and vegetables is not financially at a long-term sustainable level." Agri-tourism allows Pustizzi Farm to acquire a bigger share of local purchasing power while reaching out to a larger geographic base. "Diversification is key." People are willing to travel more for an event than a pint of blueberries.

Asked for his advice for other second career farmers, Joe quickly answered, "Do your homework!" He easily invested more than twice what he expected. The work is "strenuous on your body and you don't get sick days." Joe suggested volunteering on farms and getting to know your local farming organizations. The Cooperative Extension became one of his biggest resources for information. He currently works with four separate organizations in an average year for knowledge, support or assistance.

Ask him about next year's crops and Joe's eyes light up. "There is nothing like looking at a freshly planted field on a nice spring day." The work is hard, but rewarding. Instead of the chair at the end of an executive board table, Joe now sits up high in his John Deere thinking "this is what I want to be when I grow up."



The Mobile Poultry Processing Unit set up for processing day in Dracut, Massachusetts. Photo by Jennifer Hashley



On-farm processing lets the producer ensure that birds are handled with care. Photo by Jennifer Hashley

the satisfaction and sense of accomplishment you should feel afterwards. Sure, on-farm processing might lower your costs and help you market your birds, and it has to make sense for you financially; but don't be surprised if you feel especially proud of the end product as you hand it off to your customers.

For more information about the Massachusetts MPPUs or small-scale poultry processing in general, please visit <http://nesfp.nutrition.tufts.edu/resources/mobilepoultry.html>, email [sanderson@comteam.org](mailto:sanderson@comteam.org), or call 978-654-6745.

Sam Anderson is the Livestock and Outreach Coordinator at New Entry Sustainable Farming Project in Lowell, Massachusetts.

**NEW FARMERS**

## Second Life Farming

By Mason Donovan

The age old question of, "What do you want to be when you grow up?" is typically directed towards children, but has been coopted by a much older population these days. There are many factors influencing the decision to pick up all that you have known and choose a second career. Corporate loyalty gave way to massive layoffs breaking the unwritten cradle to grave job contract. Industries disappeared as others materialized; forcing one to rethink their path to retirement.

For Joe Pustizzi, owner of Pustizzi Farm in Boscawen, NH, it was just time to get out of the rat race. An entrepreneur at the early age of 21, Joe started a textile manufacturing business in Lawrence, MA. Over a period of 17 years, he acquired a successful business with global distribution, registered patents and trademarks, and all of the headaches associated with the continual pursuit of corporate growth. "You just get tired," Joe said with a long sigh.

When it was time to consider a second career, there was no doubt in Joe's mind he "wanted to be or do something outside." This urge familiar with many of us wanting to be closer to the land



Signs of an Expanding Farm Business Photo by Mason Donovan

Mason Donovan owns a hay farm in Boscawen, NH and founded The Yard Project organization to protect farmland, promote sustainable organic practices and assist local farmers. He can be reached by email at [FirstYard@TheYardProject.com](mailto:FirstYard@TheYardProject.com).

### Thinking about farming as a second career? Here are three places you can start your research:

- Local: Visit local to the region you want to farm. Different regions provide different opportunities and challenges from regulatory to market to growing conditions.
- Volunteer: Spend a weekend on a farm in each season of the year so you get a better understanding of the changing needs of the farm as well as start to establish your network.
- Cooperative Extension: Hands down the best resource for any first time or long time farmer. Every state has one. <http://www.csrees.usda.gov/Extension/> The Northeast has some of the best educational resources for those wanting a jump start in farming. UVM, UNH and Cornell all offer education for the beginning farmer. The Northeast Organic Farming Association ([www.nofa.org](http://www.nofa.org)) also has a beginning farmers program in every state in our region.



**STEWARDSHIP & NATURE**

# Farmscapes For Birds, Part 2

By Margaret Fowle

Audubon Vermont is working with the Natural Resource Conservation Service (NRCS) on two exciting programs, called the Forest Bird Initiative (FBI) and Champlain Valley Bird Initiative (CVBI). Both programs engage landowners in managing their land to protect a number of priority bird species in the region. Through these programs, forest, shrubland, and grass landowners are given the tools they need to make decisions about land management that benefit both the land and nesting birds.

In the Fall issue, I talked generally about Audubon's programs. In this follow-up article, I highlight some success stories from the field.

**Forests**

In Tunbridge, Vermont, Fred Pond has been working with Audubon Vermont's Forest Bird Initiative, the Natural Resource Conservation Service, and his consulting forester to provide high quality bird habitat as part of the management of his 140 acres. Audubon Vermont conservation biologist Steve Hagenbuch completed a habitat assessment for the property in 2008. One of the recommendations included in the report was to apply for a Wildlife

Habitat Incentive Program (WHIP) contract to assist in the development of early-successional habitat (young forests) for bird species such as Chestnut-sided Warbler and White-throated Sparrow. This habitat condition was deemed to be lacking on the property and the surrounding landscape. Fred's application was approved, and through a site visit that included Mary Beth Adler and Ryan Smith from the Vermont Fish and Wildlife Department, consulting forester Paul Harwood, and Steve Hagenbuch, two areas totaling approximately 4 acres were identified for conversion to early-successional habitat. In the years following implementation Audubon Vermont hopes to be able to monitor the bird response to this management practice.

According to Fred, "I feel fortunate to have Audubon Vermont involved with bird habitat on my land. In addition to the detailed report I received, providing me with customized, documented information about what birds dwell on my land, I've been able to continue my relationship with Audubon, which has been very helpful when new questions arise. The report has been useful in working with NRCS and the local river partnership in seeking funds to help support bird habitat on my land."

**Early Successional Shrublands**

Curt Alpeter qualified for a WHIP contract to manage for early successional habitat and to remove invasive honeysuckle and buckthorn on his 42 acre property in Charlotte, Vermont. Danny Peet from NRCS invited Audubon biologist Mark LaBarr to visit the site and assist in developing a conservation plan that would include work that would benefit priority shrubland bird species. Dave Adams from the Vermont Fish and Wildlife Department also joined



Audubon biologist and a landowner discuss forest management options Photo by Kristen Sharpless

the efforts. In addition to this visit, Mark conducted bird surveys on the property and located priority species such as Golden-winged Warbler. Mark provided Curt and NRCS with a written assessment and then worked with Adams to fine tune areas delineated for NRCS practices. Thickets of native shrubs were marked to be saved and areas of heavy invasive infestation were marked for removal. In addition, shrubland habitat that was reverting back to forest was identified and slated for manual clearing and brushhogging. Mark has since conducted post treatment bird surveys to assess the effectiveness of the work done and determine how the birds have responded. Curt has subsequently re-enrolled in WHIP to create additional early successional habitat on his property.

**Grasslands**

Audubon biologists Mark LaBarr and Margaret Fowle have been working with NRCS to help promote the EQIP Grassland Bird Management practice. This practice has paid landowners up to \$135 per acre for 3 years for performing an early hay cutting (before May 31) and waiting 65 days before the next cut. The payment is intended to compensate landowners for loss in quality of the hay from the delayed second cut. Qualifying fields must be high quality habitat for grassland birds so they are rectangular or square in shape, at least 20 acres in size, and have less than 10% reed canary grass. The 65-day waiting period has been proven to be enough time to allow any nesting grassland bird species such as Bobolinks or Eastern Meadowlarks to re-nest before the next cut. This is significant in that agriculture is maintained on the field (up to 3 cuts of hay per season) while providing breeding success to grassland birds nearly equal to fields not cut during the breeding season.

Margaret Fowle completed a habitat assessment for a former dairy farmer in Shelburne, Vermont in 2010. The farmer's hayfields appeared to meet the criteria for the EQIP Grassland Bird Management practice. Fowle and Danny Peet from NRCS met the landowner in the fall of 2010 to assess whether or not one or both fields would qualify. In the end, one 24-acre field qualified and was contracted in EQIP and the Grassland Bird Management practice is scheduled to begin in the spring of 2012. The other field did not meet the required qualifications due to the wetness of the soils and a large hedgerow that was growing in a portion of the field's center. Audubon Vermont hopes to be able to monitor the success of the prescribed cutting schedule with the landowner this coming spring.

Unfortunately, due to a national initiative for payment consistency, the EQIP Grassland Bird Management practice has been discontinued in Vermont and elsewhere for 2012, so no new early/late cut contracts will be signed. Audubon Vermont is working closely with NRCS staff to reinstate this practice for 2013 and beyond. NRCS in Vermont still offers the traditional and quite successful grassland bird conservation practices for delayed mowing which involves no cutting until August 1.

More information on these projects can be found at <http://vt.audubon.org/> under Science and Conservation. If you would like to visit personally with Fred Pond about his experiences with fostering bird habitat you can contact him by mail at PO Box 64, Tunbridge, VT 05077 or email [pondfc@yahoo.com](mailto:pondfc@yahoo.com).

To locate your local Audubon service center, see <http://www.audubon.org/locations/type/304>. More information on NRCS programs and contact information for your local service center can be found at <http://www.nrcs.usda.gov>

Margaret Fowle is a conservation biologist at Audubon Vermont in Huntington, VT. She can be reached at [mfowle@audubon.org](mailto:mfowle@audubon.org) or (802) 434-3806.

## Remembering Summer's Bounty

Welcome to our new photo essay feature! For 2012, we'll be bringing you seasonal images from the Whole Systems Design Research Farm in the Mad River Valley region of Vermont. The farm is a demonstration site to test out regenerative food, fuel, and shelter systems that operate on current solar energy. To learn more about the farm and Whole Systems Design, visit <http://www.wholesystemsdesign.com>



Enjoy the delicious aromas from summer's abundance when you open your preserves this winter. Featured in the photo from left to right are: cranberry preserves, garlic, hawthorne-seaberry preserves, kombucha, and shitake mushrooms.

Photo by Ben Falk

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**NEW FARMERS**

# New Farms Sprouted through Conservancy Lease Program

By Michael Chameides

In 2010, the US imported 164.4 million pounds of "fresh garlic" and garlic imports continue to rise. However, in 2012 there will be a hundred or so people in the Hudson Valley who will be getting fresh local garlic from Great Song Farm in Milan, NY. This fall, Great Song is completing its first growing season and is planting a plot of garlic to be harvested next year.

The farmers at Great Song don't own the land where they are planting their garlic and their other vegetables. They obtained the use of the property through Columbia Land Conservancy's (CLC) Farmer Landowner Match Program. The program matches farmers seeking land with landowners who want their land farmed. CLC helps the farmer and landowner create a lease agreement that is mutually beneficial. Farmers may provide services, money, or crops in exchange for access to quality farmland. Everybody wins, including area residents who have increased access to local, healthy food.

Like many of today's young farmers, the three farmers at Great Song didn't grow up farming. Jen Carson was a social worker, Anthony Mecca studied computer science and literature, and Lisa Miskelly (who just joined the farming team at Great Song) didn't work on a farm until after college. As beginning farmers, they each worked at a variety of farms around

the US and Canada. Jen and Lisa overlapped at Hawthorne Valley Farm in Harlemville, NY before going on to work at separate farms.

After years of farming, both Jen and Anthony decided they wanted to run their own farm and partnered on a new venture. The cost of purchasing land, however, was a barrier to them. This is a problem for many young farmers.

"Many of the young people who work with me on my farm hope to run their own farms one day, and most see acquiring land as the biggest obstacle," says Benjamin Shute, co-owner and manager of Hearty Roots Farm in Red Hook, NY and co-founder of the National Young Farmer's Coalition. "That's how I felt too, before I was able to rent some land from a farmer to get my vegetable operation started. Now we are trying to buy our own land, but it has been very challenging due to the very high land prices in the Hudson Valley."

CLC developed the Farmer Landowner Match Program to help address the challenges farmers are facing regarding access to land. At the heart of the program is a database that contains profiles of farms that may be available for lease and profiles of farmers looking for land and their specific needs. When a possible match is identified, CLC staff work with the interested parties to help them establish productive and long-term relationships. CLC also runs workshops that help people learn how to



Anthony Mecca prepping the draft horses

Photos by Michael Chameides

navigate the farmer landowner arrangements, including leases, insurance, and the Agricultural Property Tax Assessments.

"CLC's match program allowed us to connect with landowners around Columbia and Dutchess County," says Jen. "Without CLC's Farmer Landowner Match Program, we would most likely not have met Larry and Betti Steel, from whom we are leasing the 80 acres of vegetable field, pasture, and woodland."

This past year, Great Song Farm had 80 members in its CSA, or Community Supported Agriculture, where members pre-purchase a share in the harvest and fill up a heaping basket of vegetables every week at the farm. Jen and Anthony particularly value the community aspect of providing food. Anthony remarked how pleasurable it was to hang out during the food pick-ups and chat with the members. He explains, "Farming allows the human being to connect deeply to the surrounding world, to form an intimate relationship with soil, plants, animals, and fellow human beings that is mutually supportive."

Their approach to farming appeals to the landowners. "Like most successful marriages, the key ingredients are shared values and visions for the future," remarks Larry Steel. "There has to be mutual respect for each other and for the land and property. My wife and I have found these things with Jen Carson and Anthony Mecca. In addition, their farming practices reflect their vision for a sustainable future."

Great Song uses organic farming practices and reduces its carbon footprint and reliance on fossil fuels by employing animal power. Rather than using a tractor, they use Kate and Sunny - Suffolk Punch Draft Horses - who are responsible for most of the tilling and heavy lifting on the farm.

Jen recently started training their oxen to do some of this work as well. Jen guides Dick and Jane, the oxen, through training exercises where she teaches them to follow her body language and to refrain from grazing while they are working. They are generally very calm and obedient. However, Jen says that when they are pulling things that they get really into it and it's a challenge to get them to slow down. They also show their personality with their active interactions with humans. Dick is vocal and often calls out when people walk by; and Jane is likely to lick anybody who gets within licking range, which is about 6 inches.

Great Song Farm plans to provide food for more people next year. In addition to their weekly pick-ups at their farm in Milan, they are teaming up with Lineage Farm - in Philmont, NY - to provide 30 to 60 member shares in Poughkeepsie, NY. Compared to Northern Dutchess and Columbia County, the Poughkeepsie area has more people and less farms, so it's a natural fit that local farms will provide food to their neighbors to the south.

As the demand for local food continues to increase, there are 47 farmers in CLC's database looking for land in the area. To date, Farmer Landowner Match Program has led to 18 successful new and expanded farm ventures.

"If you are a landowner, you should really consider leasing to a farmer," says DeWayne Powell who leases 46 acres to Threshold Farms in Philmont. "Aside from the tax benefits, it's a terrific sense of accomplishment that you are doing something to preserve good farmland."

Landowners entering into a lease agreement with a farmer can lead to significant reductions in the expense of owning and maintaining land. The partnership with the farmer may include cash, crop sharing, and/or assistance with upkeep of their land. Many landowners with working farms are eligible for reduction in property taxes.

The Farmer Landowner Match Program is just part of a larger mission to ensure that farming remains a central part of the local economy and landscape. CLC holds conservation easements on 21,300 acres which permanently protects the natural characteristics of the land, including soil resources. Approximately 1/3 of this land is working farmland. CLC is currently working with Columbia County Agriculture and Farmland Protection Board to craft a plan to support and promote local agriculture. For more information on CLC's Working Farms program, contact Marissa Codey at 518.392.5252, ext. 211 or [marissa@clctrust.org](mailto:marissa@clctrust.org), or visit <http://clctrust.org/working-farms/>.

Michael Chameides is an Outreach Associate with the Columbia Land Conservancy. He can be reached via phone at 518.392.5252, ext 204 or email at [micheal@clctrust.org](mailto:micheal@clctrust.org).



Jen Carson plants garlic

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